

A blended learning approach to interaction in visual arts education: a case study of an online learning environment

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Publication Date:

2012

DOI:

<https://doi.org/10.26190/unsworks/16174>

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**A BLENDED LEARNING APPROACH
TO INTERACTION IN
VISUAL ARTS EDUCATION**

A CASE STUDY OF
AN ONLINE LEARNING ENVIRONMENT

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2012

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ACKNOWLEDGEMENTS

First, I would like to acknowledge my two committed supervisors, Kim Snepvangers and Penny McKeon, for their continued support and guidance. Kim has guided me in the design and development of the investigation and the processes involved with case studies in school contexts. Penny provided conversations about thesis structure and reviewed the document in its draft form. Both supervisors have inspired and motivated me to continue with this study. They have been caring, flexible, supportive and always available.

I acknowledge the valuable contributions of my Redlands colleagues, Fabian, Jane, Karen, and Sinikka, who supported this program and the development of MOODLE as a learning tool in the Redlands Visual Arts Department from 2006 onwards. Thank you to the Visual Arts Class of 2008, who engaged in the unit of work that was the subject of this study and who contributed honestly to online discussions. To the Redlands Westpac artists who also participated in the program and online discussions, Beth Norling, Lucia Usmiani and Darren Siwies, thank you too for your commitment to the program and for providing me with rich data sources. A special thank you should also go to Christopher Daunt-Watney, who awarded me the Redlands Staff Fellowship Award that made research a part of my life again.

I would also like to acknowledge the assistance of the College of Fine Arts Library and Kensington Library services, both face-to-face and online; and the professional editorial assistance provided by Christopher Brennan, AE (Accredited Editor, Institute of Professional Editors [IPEd]) according to Standards D and E of the *Australian Standards for Editing Practice* by the Council of Australian Societies of Editors (2001), as revised by IPed and approved by the Deans and Directors of Graduate Studies (Australia), 12 November 2010.

Finally, my deepest thanks go to Mark, who has for some years now listened, and discussed and commented on many parts of this study, and taken Caden out so I could write! Both of you have made sacrifices for me to complete this study. Thank you for your love and support through this long process.

CONTENTS

ACKNOWLEDGEMENTS	3
LIST OF TABLES	7
LIST OF FIGURES	9
ABBREVIATIONS	10
ABSTRACT	12
CHAPTER 1 – INTRODUCTION.....	13
<i>Overview of the Study</i>	13
<i>Case Study Background</i>	16
<i>A Social Context for Learning in Visual Arts Education</i>	17
<i>A Blended Approach to Program Design in the Social Organisation of Instruction</i>	23
<i>The Problem: Socially Mediated Communication in Visual Arts Education</i>	23
<i>The Purpose of the Study</i>	24
<i>The Research Questions</i>	25
<i>Research Question 1 (RQ1)</i>	25
<i>Research Question 2 (RQ2)</i>	25
<i>Research Question 3 (RQ3)</i>	25
<i>The Need for, and Significance of, the Study</i>	26
<i>Limitations of the Study</i>	27
<i>Terms Used in the Study</i>	30
<i>The Structure of the Study</i>	33
CHAPTER 2: THE RESEARCH FRAMEWORK AND LITERATURE	35
<i>Introduction: Social Constructivism and Technology in Art Education</i>	35
SOCIAL CONSTRUCTIVISM: VYGOTSKY AND SOCIAL DEVELOPMENT THEORY.....	36
<i>Introduction</i>	36
<i>The Appeal of Vygotsky's Theories</i>	37
<i>A Brief Digest of Vygotsky's Work</i>	39
THE SOCIAL CONTEXT FOR LEARNING	40
<i>The Role of Schooling</i>	40
THE SOCIAL ORGANISATION OF INSTRUCTION	41
<i>Instruction and Transformation</i>	41
<i>Defining the Concept of the ZPD</i>	42
<i>The ZPD Used to Locate Individual Differences</i>	43
<i>The ZPD as a Framework, Scaffold or Leading Activity</i>	45
<i>The ZPD Interpreted as Assisted Performance and Symbolic Space</i>	51
<i>A Critique of Current Notions of the ZPD</i>	55
SOCIALLY MEDIATED COMMUNICATION	58
<i>Mediation and Higher Mental Processes</i>	58
<i>Art, Cognition and Mediation</i>	60
<i>Mediation in Content and Curriculum</i>	63
<i>The Relevance of Vygotsky's Theoretical Framework</i>	68
CURRENT LITERATURE: THE SOCIAL CONTEXT, INSTRUCTION AND MEDIATION.....	69
<i>The Social Context for Learning: A Background to the Changing Role of Schooling in Australia</i>	70
<i>How Does the Shift in the New Economy Impact on Teaching and Learning?</i>	71
<i>Social Capital and the Rise of Technology</i>	77
<i>Online Learning: Defining the Changing Role of Schooling in Australia</i>	80
<i>Social Organisation of Instruction: Online Environment, Theory, Interaction, Blended Approaches</i>	84
<i>Online Learning Theories</i>	86
<i>Online Interaction</i>	89
<i>Definition of a Blended Learning Approach to Instruction</i>	91
<i>Socially Mediated Communication in Secondary Visual Arts Education</i>	94
<i>Chapter Summary</i>	97
CHAPTER 3 – THE RESEARCH DESIGN AND METHODOLOGY.....	99

<i>Introduction</i>	99
<i>The Overall Objective of the Study</i>	100
<i>The Research Questions</i>	100
<i>Site Selection</i>	101
<i>Ethics</i>	101
<i>The Research Participants</i>	102
<i>Sample Selection</i>	103
<i>Bias</i>	105
<i>Methods of Data Collection</i>	106
<i>RQ1 Questionnaires and Student Reflections</i>	106
<i>Data Analysis: Qualitative and Quantitative Complementary Methods</i>	109
<i>Triangulation in This Research Design</i>	114
<i>Methodology: Qualitative Research in Technology</i>	115
<i>The Single Case Study Approach</i>	117
<i>The Case Study Model</i>	118
<i>Program Context</i>	120
<i>The Visual Arts Program Design</i>	121
<i>Interaction</i>	123
<i>Vygotsky: The Zone of Proximal Development (ZPD)</i>	123
<i>Perceptions: The Use of Salmon's Five-Stage Model</i>	123
<i>Processes: The Triple P Framework</i>	124
<i>Products</i>	125
CHAPTER 4 – RESULTS AND DISCUSSION	126
<i>Introduction</i>	126
<i>RQ1(a) Results</i>	126
<i>RQ1(b) Results</i>	133
<i>RQ1(c) Results</i>	140
<i>RQ2(a) Results</i>	150
<i>RQ2(b) Results</i>	164
<i>RQ3 Results</i>	169
<i>Summary of Findings</i>	171
CHAPTER 5 – CONCLUSIONS AND RECOMMENDATIONS	175
<i>Introduction</i>	175
<i>The Relevance of Theories Used in the Study</i>	175
<i>The Application of Theory to Visual Art Education</i>	176
<i>The Appropriateness of Research Design</i>	178
<i>Summary of Research Findings</i>	178
<i>Preliminary Conclusions from the Study</i>	181
<i>Recommendations from the Study</i>	183
<i>Concluding Remarks</i>	185
<i>Suggestions and Implications for Continued Research</i>	188
APPENDICES	191
<i>Appendix 1: Participant Information Statement and Consent Form</i>	191
<i>Appendix 2: Pre-Online Learning Questionnaire</i>	194
<i>Appendix 3: Online Feedback Questionnaire</i>	195
<i>Appendix 4: The Triple P Framework Model</i>	197
<i>Appendix 5: The Conceptual Framework Scaffold</i>	198
<i>Appendix 6: Art Prizes in Australia Case Study Program</i>	199
<i>Appendix 7: Online Learning Activities</i>	200
<i>Appendix 8: Pre-Online Questionnaire: Responses to Question 10</i>	203
REFERENCES	208

LIST OF TABLES

Table 1: *How Cole's Four Features of Apprenticeship Related to the Current Study*

Table 2: *Summary of Elements of Proposition 5*

Table 3: *Research Participants*

Table 4: *RQ1 Data Collection Instruments*

Table 5: *Outline of the Data Collection Methods and Rationale, and How They Related to the Research Questions*

Table 6: *Online Reflection Tasks, Questions and Timing*

Table 7: *Triangulation in the Research Design*

Table 8: *Visual Arts Program Activity Overview*

Table 9: *Technical Skills: Summary of Results*

Table 10: *Pre-Online Learning Questionnaire Group Work Questions*

Table 11: *Art Writing Practice: Summary of Student Responses*

Table 12: *Reflection Questions and Total Student Group Posts*

Table 13: *Comparison of Task 3 and Task 5 Reflection Statements*

Table 14: *Student Responses Highlighting Positive Interaction with the Online Artist Practitioner*

Table 15: *Responses of Students 1 to 9 to Question 43*

Table 16: *The Number of Posts Lodged in Five Threaded Discussions*

Table 17: *The Number and Kinds of Interactions between Participants*

Table 18: *Interpretation of Student Questions in the Who Am I? Discussion Forum*

Table 19: *Artist's Responses to Clues about Artwork and Researcher's Interpretation of Them*

Table 20: *SAS2 Response 6 and Researcher's Interpretation of It*

Table 21: *SAS4 Response 32 and Researcher's Interpretation of It*

Table 22: *Summary of Responses in Discussion Threads according to Theme Categories*

Table 23: *Summary of Responses Categorised as ‘Makes Connections and/or Sees Relationships’*

Table 24: *Artist’s In-Depth Descriptions and Researcher’s Interpretations*

Table 25: *The Ways that the Students’ Questions Engaged Aspects of the Conceptual Framework*

Table 26: *Artist’s Input Demonstrating Advice Given to Students in ARTIST Discussion Thread*

Table 27: *Artist’s Advice in the AUDIENCE Discussion Thread*

LIST OF FIGURES

- Figure 1: *MOODLE front page, 2010.*
- Figure 2: *MOODLE Visual Arts case study online view, 2010*
- Figure 3: *Gallimore and Tharp's genesis of performance capacity*
- Figure 4: *Gilly Salmon's Five-Stage Model as a social scaffold*
- Figure 5: *Program design model for identifying online interaction in art*
- Figure 6: *The number of negative comments in reflection tasks 3 and 5*
- Figure 7: *Student opinions about technical issues, QQ1–4*
- Figure 8: *Student opinions about unit expectations, QQ6–10*
- Figure 9: *Student opinions about online activities, QQ11–14*
- Figure 10: *Student opinions about art tasks, QQ17–19*
- Figure 11: *Student opinions about art writing practice, QQ21–25*
- Figure 12: *Student opinions about group work, QQ26–31*
- Figure 13: *Student opinions about learning, QQ33–37*
- Figure 14: *Student opinions about e-tutor, QQ38–40*
- Figure 15: *Student opinions about art practitioner, QQ41–42*

ABBREVIATIONS

ABC	Australian Broadcasting Corporation
ACCE	Australian Council for Computers in Education
ACDE	Australian Council of Deans of Education
AFH	Arty-Farty Homosapians [<i>sic</i>] (spelling chosen by student-participants)
AFH1a/b/c	Arty-Farty Homosapians [<i>sic</i>] Student 1 section a/b/c
CM	Computer-Mediated
CMA	Course Management Software
CMC	Computer-Mediated Communication
DER	Digital Education Revolution
FTF	Face-to-Face
HSC	Higher School Certificate
ICT	Information and Communication Technologies
IQ	Intelligence Quotient
IT	Information Technology
MCEECDYA	Ministerial Council for Education, Early Childhood Development and Youth Affairs
MOODLE	Modular Object-Oriented Dynamic Learning Environment
NSW BOS	New South Wales Board of Studies
OvsA	Obelix vs Asterix [<i>sic</i>] (spellings chosen by student-participants)

OvsAS1a, b, c	Obelix vs Asterix [<i>sic</i>] Student 1 section a, b, c
Q1/2/3 etc	Question 1/2/3 etc
RQ1/2/3	Research Question 1/2/3
RWAP	Redlands Westpac Art Prize
S1/S2/S3 etc	Student 1, 2, 3 etc
SA	Smart Arts (student group)
SAS1a, b, c	Smart Arts Student 1 section a, b, c
VLE	Virtual Learning Environment
ZPD	Zone of Proximal Development

ABSTRACT

The aim of this study was to design, implement and evaluate a New South Wales secondary school blended Visual Arts Program. The online learning activities utilised Salmon's (2002) Five-Stage Model for online learning. The investigation explored two related areas: (1) limited reports of historical and critical evaluations of Visual Arts Education in Australia and worldwide, and (2) the effect that a blended approach to learning has on student perceptions, online interactions and work samples. The sample in the current study investigated a class of twelve students, two teachers and three art practitioners who worked online using MOODLE over a twelve-week period. A further subsample selection was made to isolate the group with the highest interactivity. Methods of data collection included complementary qualitative and quantitative strategies. A variety of data instruments were designed and used to analyse pre-online and post-online questionnaires; pre-, mid-, and post-online reflection forums; teacher, student, and artist interactions; and asynchronous online dialogue. Data analysis was emergent and initially the pawing method was used to isolate salient categories, subcategories and themes, before effective instruments were designed. Coding of responses was developed and direct interpretations made. Triangulation of the data occurred at the level of data collection, research question design and data instruments created. The results demonstrated student misconceptions and established the value of online learning experience, but they also effectively isolated examples of interactions in discussions that encapsulate the theoretical aspects of this study. There were six preliminary findings. This study has shown that a blended learning approach to learning in the Visual Arts using an online environment can successfully engage students in socially mediated interactions with art practitioners and changes student perceptions about learning. There is evidence to suggest that blending art, technology and authentic face-to-face and online experiences in the Visual Arts makes meaningful interactions possible.

CHAPTER 1 – INTRODUCTION

Overview of the Study

The main aim of this study was to investigate the appropriateness of implementing the principles of a blended approach to learning in a Visual Arts secondary teaching program. In developing the study there were two major motivations in researching and developing a secondary school program that utilised current ICT practices. First, there is limited research reported in the way that critical and historical areas of the Visual Arts Syllabus,¹ (2009) are taken up in the context of online learning in art education. The use of computer mediation in art education is also limited (Scott, 1992). Secondly, the researcher, as a practising secondary Visual Arts teacher, believed that authentic learning experiences, such as those provided by working with actual artworks and the artist practitioner, provide students with opportunities for deeper engagement. A blended approach to programming, gives students the opportunity to engage in meaningful interactions with artists in the MOODLE online environment. The ability to have complementary face-to-face classroom experiences with the actual artworks and in-group situations highlighted the importance of this process. As the case study unfolded, mediation between artists/students and meaning making became the central premise for learning. The significance of the study is that cognitive ideas from Vygotsky (1978) and the broader educational field are linked in a practical way to learning, instruction and mediation within art education (Efland 2002). Cognitive theory provided the structure for the research framework and gave this study, avenues to make useful connections to the emergent nature of qualitative investigations of online interactions and consequent data results.

¹ For the New South Wales Board of Studies Visual Arts Syllabus, 2009, see http://www.boardofstudies.nsw.edu.au/syllabus_hsc/pdf_doc/visual-arts-st6-syl-from2010.pdf

The philosophical work of Vygotsky (1978, 1986, 1987) informed the threefold research framework, which is detailed in the next chapter, but more importantly it contributed the theoretical notion of meaning construction, which is defined by Vygotsky (1978) as socially mediated interaction with others. Socially mediated interaction was used to make connections to relevant literature, theoretical frameworks, models of learning and art education theorists that were used in this study. The relevance of Vygotsky's work binds the theoretical notions of such authors as Arthur Efland (2002), Kerry Freedman (2003) and Graham Sullivan (1993), who have expanded Vygotsky's work and made it relevant for contemporary art education. The importance of placing art education at the centre of cognition is best explained by Efland's (2002) integrated theory approach and the emphasis on learning through meaning making. The importance of mediation in the subject of Visual Arts and its potential for cognitive transformation are areas for further research as contemporary modes of learning that are blended or online are not evident in recent research. This seems contradictory as it is of the nature of the subject of Visual Arts for it to structure itself within common mediated exchanges of multiple interpretations of art. See a discussion of the Frames in the current Visual Arts Syllabus 2009 page 25.

As a response to the lack of research in blended and online applications in the subject of the Visual Arts, the design of a suitably engaging secondary program and case study research design, based on Gilly Salmon's Five-Stage Online Learning Model (2002), took shape in the researcher's own teaching context, utilising existing school resources. It was at this point that the purpose and objectives of the current study were confirmed. The first objective was to demonstrate student perceptions pre-, mid-, and post- their online experience; the second, to evaluate socially mediated communication and interaction with an art practitioner; and the third, to evaluate outcomes in the form of possible work samples for further development and iteration in the researcher's own teaching practice. The three objectives mirrored the online work of Ken Ryba, Linda Selby and Mandia Mentis (2002), who investigated the formative evaluation of online programs. The three

objectives were also paralleled within the triangulation of the research design and the research questions. This provided a three-tiered methodology that utilised complementary qualitative and quantitative analysis procedures to support and illustrate the research questions. See Chapter 3 for a full discussion.

The study has used a mixed method approach to data gathering, analysis and investigation. For example, researcher-designed questionnaires, student reflection statements, emergent statement categories and theme coding were utilised to isolate and investigate salient student, teacher and artist online dialogue. Interactions and dialogue statements were analysed first quantitatively then through qualitative emergent categories. Interpretation of dialogue was completed through direct interpretation of the data, the qualitative processes of member checking, and results are reported using emergent descriptive interpretation, tables and graphs. The data tools were designed by the researcher and are discussed in Chapter 3 to uncover examples of the theoretical positions explored in the research framework and questions. The findings are summarised to point out student misconceptions; the value of online learning and asynchronous discussion; the application of, and reflection about, group work in an online environment; and the understanding of text types in art writing practice. The kinds and amount of interaction within forums were also significant areas of investigation, and findings are related to the isolation of student examples of ‘meaningful understanding’ (Sullivan, 1993) and to the ‘enactment’ (Freedman, 2003) of the Visual Arts Syllabus through the Frames and Conceptual Framework scaffolds.

Six preliminary conclusions have been drawn; these demonstrate the significant impact of the study in the secondary school setting and the formative nature of evaluation of the program. Finally recommendations are offered to the school’s Visual Arts Department and for future research.

In the remainder of the introductory section, the case study background and context of the research are outlined.

Case Study Background

The Redlands case study developed when the researcher made inquiries into the notions of constructivism, technology and higher order thinking in Visual Arts Education. The available literature showed a paucity of significant studies using the Visual Arts as the subject of blended or online learning. This led the researcher to the path of establishing how Visual Arts could participate in a constructivist experience within education. At first, the researcher was interested in establishing a community of practice (Lave & Wenger, 1991) using a constructivist model of delivery as described by Jonassen, Peck and Wilson (1999), but as more research was compiled on the definition and development of this type of learning it was deemed too broad and difficult to achieve within a school environment and a limited time. A model that could support constructivist learning was needed. Salmon's (2002) model emerged as a suitable vehicle to establish program design principles as it demonstrated how one would write for and support students working in an online environment. The decision to develop a blended approach to include online and face-to-face activities was decided by the researcher because, in the study of Visual Arts, the art object and the art practitioner are central. The direction of the case study became clearer when the research design was decided upon and the commitment was made to use two models: an online learning design (Salmon, 2000) and an evaluative framework (Ryba et al. 2002).

The nature of this case study was to investigate the interactions that occur in online learning as an educational method for Visual Arts students in a secondary school setting. In particular, the focus of the case study was the development, delivery, and formative evaluation of an online learning unit within a program of work for Year 12 HSC students (2008) based on the Redlands Westpac Art Prize and Collection. This study took place in a blended learning mode of face-to-face teaching and online delivery using a discussion forum type option as offered by the MOODLE online platform.

A Social Context for Learning in Visual Arts Education

The physical setting for this case study was defined by three different student experiences. The first, the art prize competition, which is held annually at the Mosman Regional Art Gallery; the second was the art collection, as a teaching resource; and the third was the communications with associated art practitioners in an online learning environment. The importance of establishing the educational role of the Redlands Westpac Art Prize was also considered here. The following five sections outline the background to the prize, its educational role as a teaching resource, and the complementary use of MOODLE to encourage study.

1. The History of the Redlands Westpac Art Prize

The Redlands Westpac Art Prize was established in 1996. The aim of the Headmaster of Redlands at that time was to establish a teaching collection for the school's students. The collection was to expose students to contemporary Australian artists and their works in the discipline of painting. The main goal was to acquire a collection that would provide students and the general school community opportunities to experience art objects directly in the school setting.

The art prize is sponsored by Westpac Bank, which each year gives the \$20 000 prize money. Many other companies that have a relationship with the school also donate money or time in exchange for advertising on the school's website, in the school newspaper, and within the exhibition catalogue. Since 1999, the prize has been held at the Mosman Regional Art Gallery, siting the exhibition in the broader community and the Australian art world. The prize has an experienced curator who each year invites well known and up and coming Australian artists to submit work not previously exhibited. An art judge is then invited to view the exhibition and choose the winning work. There is also the opportunity for the audience to vote for a Viewers' Choice Prize. Currently the teaching collection is housed in the Arnold Library and *Lone Oak*, the main administration building at Redlands.

Over the past twelve years the collection has evolved to include artists such as Imants Tillers, Lindy Lee, Tim Johnson, Gordan Bennett, Philip Wolfhagen, Sally Smart, Julie Rrap and Darren Siwes. In 2004 the prize was restructured to enable emerging artists to participate. Established artists were asked to invite an emerging artist of their choice to join in the exhibition. The first \$5000 acquisitive prize was awarded to Megan Seres for the work 'Untitled 2004'. This restructuring added yet another dimension to the success and growth of the art prize. The school has developed a comprehensive website documenting the artists, their works and the history of the prize.

2. The Educational Role of the Redlands Westpac Art Prize and Collection

The Visual Arts at its core is about understanding the world through direct experience with artworks. This direct interaction is an important step in the study of art. The meanings that are understood from these authentic engagements are unique. Artists may choose to reveal personal, social, cultural, political or religious events within complex artworks, and these need to be experienced, interpreted and understood first-hand. Meaning and purposes are encoded in an artist's conceptual and material practice, and subject matter. These are often not experienced by the audience when works are studied from reproductions, either in print or through virtual digital media. It is vital for students to engage with artworks and the associated environments that artworks exist in for authentic meaning to be elicited and understanding to take place. The importance of the Redlands Westpac Art Prize collection for students of Visual Arts at Redlands is first and foremost that students be given the opportunity to have such direct experiences of artworks within the school setting.

Authentic experiences with artworks usually take place in the museum or gallery within the framework of an excursion. Often the time with artworks is limited to a single day and may even be reduced to minutes and short dialogues led by teachers or gallery public programs staff. Students may be passive and minimally interactive unless prompted by structured activities. Completing

activity sheets, sketching, and writing personal notes about their experience are typical examples of what students may do in the gallery context.

The Redlands Westpac Art Prize collection allows students to become engaged with artworks both formally and informally for short or long periods of time. The artworks can be revisited, photographed, sketched and interpreted from the student's perspective. This flexibility is an advantage in how artworks can be understood by students at different stages of education. Tapping into this resource, together with a connection with the associated art practitioner, is what makes this program and case study distinctive from textbook-based learning and what gives the experience its significance.

The school is an active supporter of the arts community by hosting this annual contemporary art prize. The prize is recognised in the art world and within the community as a prestigious event. The school has developed strong connections to the Mosman Regional Art Gallery and its staff. The art prize also provides the school with a forum to facilitate interactions between business associations that sponsor the prize, and parents, staff and the community in general.

3. The Redlands Westpac Art Prize and Collection as a Teaching Resource

The Redlands Westpac Art Prize is an annual event that Year 12 Visual Arts students participate in through a planned visit to Mosman Regional Art Gallery. Activities that have occurred within the gallery context include:

- Short presentations on the history of the prize and how it works.
- Exhibition reviews based on curatorial aspects and audience impressions of the winner.
- Use of the syllabus Frames² to categorise and describe works.

² 'Frames' is a term used in the NSW BOS Visual Arts Curriculum and relates to a scaffold used to encourage students to view artworks from four perspectives. The frames are Subjective, Structural, Cultural and Postmodern. For more information, see the pdf at http://www.google.co.uk/search?client=safari&rls=en&q=NSW+BOS+Visual+Arts+stage+6+curriculum+link&ie=UTF-8&oe=UTF-8&redir_esc=&ei=cyUOT4nGJYGV8QO_hcTrBQ

- Students' photographing of favourite works or sketching of them for their Visual Arts Process Diaries.
- Students' participation in the Viewer's Choice Prize (after their having been supplied with a copy of the catalogue).
- Presentations to students by selected artists or the curator.
- Students' discussion of artworks with others while still in this authentic context.

The art collection has not formally entered into programming within the Visual Arts Department of the school, as the artworks have not always been on site and on display in student-accessible areas. This has been due to architectural limitations of the school's physical environment. But with the completion of the Peter Cornish Building and the Arnold Library, large works such as those by Imants Tillers and Lindy Lee can now be displayed within the school. Part of the Art Prize Committee's role is to make sure the works are framed and mounted for display with appropriate didactic panels. Student access has always been a key issue and the use of the works educationally underlies the prize's existence. The collection is spread across two campus locations. Student accessibility varies according to the location of the works. This limitation should be addressed in the future as the collection continues to expand. A comprehensive website has also been used as a vehicle to introduce students to the art prize. This site documents the historical development of the prize.

4. Online Interactions with Art Practitioners

The MOODLE online learning environment was used in this case study to generate interactive communication and dialogue between students, teachers and art practitioners. The context of group work online was the main environment participants engaged in, although this was often asynchronous. This setting gave students direct access to artists. Being able to formulate

discussions based around common syllabus structures, such as the Conceptual Framework,³ helped direct student questioning and discussions with online practitioners.

5. MOODLE as a Learning Community for Visual Arts

This study used MOODLE courseware as a vehicle for delivering the online component of the Visual Arts Program. The MOODLE platform was selected for six main reasons:

- (1) MOODLE is an open source Course Management System (CMS), also known as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). It was authored by an Australian and requires no ongoing payments for logins once it is established on a server.
- (2) MOODLE allows for a blended learning approach to course delivery.
- (3) MOODLE has chat, forum and wiki functions that support synchronous or asynchronous interactive opportunities for student online activities that the Visual Arts Program needs.
- (4) MOODLE is also consistent with the social constructivist tradition that this study used as its research framework.
- (5) MOODLE can be partnered and synchronised with Edumate, the existing school data management system, to help in the management of course enrolments.
- (6) MOODLE gives authorship capabilities for both, administrator and teacher levels, allowing for the establishment of unique pages and course-specific plug-ins.

For these reasons MOODLE was suitable for establishing a learning community for Visual Arts and the broader school community of Redlands. The front page of the school's MOODLE website follows, in Figure 1.

³ 'Conceptual Framework' is a term used in the NSW BOS Visual Arts Curriculum and relates to a scaffold used to encourage students to draw relationships between the World, the Artists, the Artwork and the Audience. For more information, see the pdf at http://www.google.co.uk/search?client=safari&rls=en&q=NSW+BOS+Visual+Arts+stage+6+curriculum+link&ie=UTF-8&oe=UTF-8&redir_esc=&ei=cyUOT4nGJYGV8QO_hcTrBQ



Figure 1: MOODLE front page, 2010

Figure 2 presents the Visual Arts case study page as it was set up for the online component of the program. The figure indicates the tasks and discussion forums that the students have used to complete the unit.

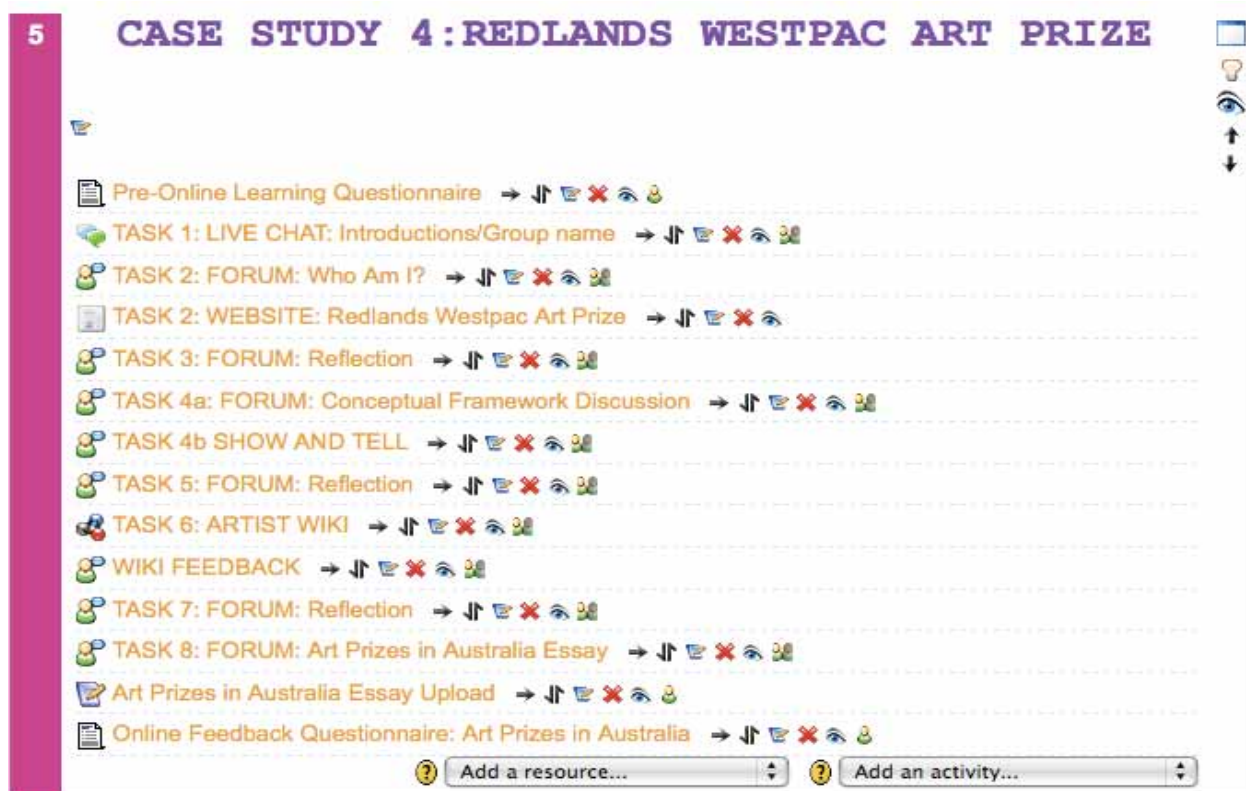


Figure 2: MOODLE Visual Arts case study online view, 2010

A Blended Approach to Program Design in the Social Organisation of Instruction

The Visual Arts Program design for this case study identified three important areas of online interaction in the practices of art. It was developed after careful research and planning. The social aspects of learning, such as context and instruction (Vygotsky, 1986), were considered as the research framework unfolded. A blended approach to learning (Graham, 2005; Krause, 2008; Littlejohn & Pegler, 2007) was established as the mode of delivery for the program. Activities were tailored to include both face-to-face and online experiences. As the study design emerged, the researcher decided that online interaction would be the only site for investigation in this case study.

The Problem: Socially Mediated Communication in Visual Arts Education

For teachers who generate, implement and evaluate programs, the emerging and growing educational structures afforded by the internet, software applications and learning platforms have been a way forward in developing units of work for students in Visual Arts. Learning about

software as a tool is common in artmaking units, as there is a greater emphasis on artmaking in the New South Wales Visual Arts Curriculum. In the history and criticism components of the course, word processing may be used in essay writing or a Powerpoint presentation. Examples of learning through technology are less obvious. These observations were highlighted further when the researcher began to look for examples of literature and studies dealing with the historical and critical application of technology in Visual Arts Education.

There are two aspects to the problem that lies behind this study:

- (1) the limited number of research reports of historical and critical evaluations of Visual Art Education in Australia and worldwide
- (2) the determination of what effect a blended learning environment has on student perceptions, interactions and work samples.

The Purpose of the Study

The aim of this study was to design, implement and evaluate a blended unit of online work for Year 12 students completing the Higher School Certificate Visual Arts course. The three objectives of the study stemmed from the researcher's interests in current ICT research practices and were further influenced by the research framework. The first objective was to demonstrate student perceptions before, during and after their online experiences. The second was to evaluate the socially mediated communication that is produced during the online sessions while students are working with an art practitioner; and the third was to evaluate the outcomes in the form of possible work samples. The methodology was correspondingly focused on the three objectives as the major site for case study research investigation. The study also made connections with, and contributions to, the development of art historical and critical research in the secondary school setting.

The Research Questions

The research questions in this study were specifically designed to investigate the research framework of the study, as set out in Chapter 2. Research Question 1 (RQ1) investigated the social context for learning, focusing on student perceptions of, and reflections on, their experiences while in the program. RQ2 was designed to investigate the socially mediated communication of the participants, while RQ3 evaluated outcomes.

Research Question 1 (RQ1)

This comprised three subquestions:

- (a) What are student's initial perceptions of online learning, interaction, group work and the practice of art writing? (an exploratory question posed pre-online)
- (b) How do students perceive their experiences in using technology for group work, online learning and the practices of art writing? (an explanatory, reflective question posed online)
- (c) Do student perceptions change as they engage in the unit of work? (posed post-online)

Research Question 2 (RQ2)

This comprised two subquestions:

- (a) What kind of communication in an asynchronous online learning environment promotes meaningful understanding in a Visual Arts Education context? (an exploratory question)
- (b) How are Visual Arts Syllabus processes enacted within online learning and specific Visual Arts tasks? (an explanatory question)

Research Question 3 (RQ3)

What kind and quality of student products are developed through the online learning environment?

The Need for, and Significance of, the Study

The study evolved over three years. At the time of initial development, there was a lack of relevant research examples and papers in online learning and blended approaches to teaching with technology in secondary school Visual Arts Education. Typically, research in Visual Arts Education has been about artmaking from a teacher's perspective (Bullock & Galbraith, 1992), assessment of work (Blaikie, 1994; Blaikie, Schönau, & Steers, 2004), or interpreting children's artmaking from a psychological viewpoint (Cox, Koyasu, Hiranuma, & Perara, 2001). However limited research is available in the writing practices of art (Lee 1993; McLaughlin, Thomas, & Peterson, 1984; Szechter & Liben, 2007). This is particularly so when considering the use of online practices. (No examples were located through literature searches). There seems to be a slow adoption of this type of teaching and learning practice in Visual Arts Education.

The nature of Visual Arts Education as a meaningful and critical pursuit was captured in Graeme Sullivan's paper, 'Art-Based Art Education: Learning that is Meaningful, Authentic, Critical and Pluralist' (1993). Sullivan's work exemplifies the approach taken in the motivation and design of the current study. Sullivan recognised art theoretical practices as remaining underutilised as a centre of influence in art education. He identified a 'gap' in the teaching discipline of art education. The present study, and specifically the Visual Arts Syllabus program design, offered an opportunity to start to fill the gap between the teaching of theory and the doing of the practical in art education. Sullivan gave an example of how historian and critic, Mary Eagle (1990, in Sullivan, 1993), who works from an ethnographic point of view, establishes her critical practice from direct experience with an art object and then a discussion with the artist. Eagle frames her critique from this experience. This ethnographic approach is distinctive in the Visual Arts Program in this study.

Typically, New South Wales Visual Arts students study works of art from reproductions in print or digital media. They may see an exhibition where they may be confronted by real artworks

and a short address from a teacher or gallery educator. The Visual Arts Program at Redlands exists because of the school's commitment to hosting the Redlands Westpac Art Prize and to having an art collection accessible on site. This gives students the opportunity to become directly engaged with artworks both formally and informally for short or long periods of time. Such direct experiences with artworks in the school setting are rare because the majority of schools do not have the funding to acquire such a collection. The value of access to the collection allows students to revisit, photograph, sketch and interpret the artworks at many levels over time.

Within the context of the school itself, at the beginning of the current study, working online was not a method used by any department. Blended learning was not used as a teaching practice generally in the curriculum or specifically within the Visual Arts Department. To gain access to the artists whose works are in the collection, the program was devised to include an online component where students could have a discussion with the artists. This subsequently informed their critical/historical writing and their understanding of the artist and his/her works. Tapping into this resource and making connections to the artist practitioner is what makes the Visual Arts Program design and subsequent research in this study significant.

Limitations of the Study

This study was a single case study. No broad generalisations can be made from it. The study investigated a sample of twelve students, two teachers and three art practitioners while working with a blended approach to delivering face-to-face and online discussion over an eight-week program. The unit of work fell within the framework of the NSW BOS Visual Arts Stage 6 Curriculum and it focused on a Visual Arts Case Study, *Art Prizes in Australia*. Visual Arts Case Studies involve four to ten hours of face-to-face study.

Further, the study used only one small group of six participants to investigate interactions, dialogue and sample work. In one episode the researcher had to act as a participant-observer due to a technical problem that needed addressing to enable the students to continue working online.

Another important limitation of this study was the shortage of time available to train staff, artists and students to deliver and engage in the online component of the program. Student participants did not complete all the activities (namely Tasks 7 and 8) in the online program or research model. Task 7 was the third online reflection opportunity and Task 8 was the *Art Prizes in Australia* essay. It was not possible to extend the project as the participants had other important HSC commitments. However, points of interest for the researcher emerged from the work that was completed.

Access to internet was an issue for one participant in the group. Not having access at home for even a short period of time impeded that participant's progress in the first two activities of the online program.

The group dynamic was also important in the motivation to undertake and succeed in the online component. The group chosen for investigation worked successfully in an asynchronous manner. The group also demonstrated a commitment to the Visual Arts course and program, forming good online working practices.

While the researcher is aware there are many approaches in blended learning, the use of a blended approach has been limited to an activity level definition (Graham 2005) where both face-to-face and online activities are offered to students. This decision provided for the interpretation of the NSW Visual Arts Syllabus and related to the specific use of the Salmon Five Stage Model in the Visual Arts Program.

The model used to develop the online component of the Visual Arts Program was Salmon's (2002) Five-Stage Model. In the current study the model was used to define the scope of the

methodology and arrange online group experiences. Salmon's model sets up an organisational structure for the learning tasks.

The structure of the formative evaluation of the current study drew from the Triple P Framework developed by Ryba et al. (2002). The triangulation and positioning of the research questions followed the three broad areas of evaluation as set out by the framework to include perceptions, processes and products. It was not the intention of the current study to use all aspects of this framework. Rather aspects of the framework were used to strengthen and confirm the credibility of the research design.

The use of Vygotsky's (1978) Zone of Proximal Development (ZPD) in the study was limited as a theoretical point of view to ensure the researcher had designed the learning activities to maximise student's abilities to interact with adult practitioners within the online context. The case study did not elucidate an individual participant's psychological ZPD, nor whether participants' ZPDs widened through the process of working with adults.

The results also have limitations. The Online Feedback Questionnaire had one unintended error with a group task question (Q29), where students were not able to respond because of a technical error in the survey design in MOODLE. Students also experienced difficulties with the last discussion thread where, initially, they were not able to post attachments to the forum. The MOODLE default for attachments was set to 2meg⁴ and needed amendment. This impeded the initiation of the discussion thread. Further issues with this particular discussion thread became evident in the use of files, including those created in various versions of Microsoft Word. Some students could not access files to update. This caused a significant time lag in the completion of the discussion and activity.

⁴ 2meg refers to the amount of data upload available to students.

The final limitation that directly related to the collection of data came with the realisation that the IT Department in the school had decommissioned the MOODLE server without the researcher's prior knowledge. This meant that work samples that the researcher needed for RQ3 were lost. These technical issues were all emergent limitations imposed on the study. Recommendations from this study are derived from the limitations as set out in the introduction and from the results of the three research questions in Chapter 4.

Terms Used in the Study

The following glossary indicates how various terms and their intentional use is understood in the context of this study.

Art: refers to the art world and encompasses the whole of art.

Art Education: refers to North American sources. This is a generic term encompassing the study of, and research and theories in, education about art.

Blended Learning: an integration of a variety of best-practice face-to-face instructional methods and complementary asynchronous online experiences (Krause, 2008).

Case Study: (1) in the context of research methodology as described by Stake (1995), the current study utilised the single case study approach in its design; (2) in the context of the New South Wales Board of Studies Curriculum, the term refers to programs used as historical/critical case studies in Visual Arts Education. These are typically units of work for senior students. A Visual Arts Case Study is defined in the syllabus as working to 'provide a means of studying particular cases in the Visual Arts. Their function within the classroom is to illustrate a point or something of significance' (NSW BOS Visual Arts Stage 6 Curriculum, 2009, p. 33).

Conceptual Framework: as referred to in the NSW BOS Visual Arts Curriculum: 'students learn about the conceptual framework that provides a model for understanding the agencies in the art world – the artist, artwork, world and audience. Students also learn about how this framework

provides for the understanding of the intentional and functional relations between artists and their artworks, audiences and artists, audiences and artworks etc' (Visual Arts Curriculum Stage 6, 2009, p. 23).

Frames: as referred to in the NSW BOS Visual Arts Curriculum: 'students learn about the frames – subjective, cultural, structural and postmodern – that provide different philosophical/theoretical and interpretive frameworks for understanding the layering of meaning, significance, value and belief in and about the visual arts' (Visual Arts Stage 6 Syllabus, 2009, p. 25).

Interaction: is related to the interactivity that holds a firm relationship with social development theory (Vygotsky, 1978) and the learning process that takes place within a community of practice (Lave & Wenger, 1991).

Mediation: refers to one or other of the following:

- (1) according to Vygotsky: symbolic tool use in human adult–child interactions within a cultural setting (Vygotsky, 1987)
- (2) socially mediated communication in online interactions known as computer-mediated communications
- (3) according to art education: meaning making in artistic interactions (Sullivan, 1993).

Online Learning: as defined by Ally (2004): interaction with content, instructor, [practitioners] and other learners; and the obtaining of support during the learning process in order to acquire knowledge, construct personal meaning, and grow from the learning experience.

Social Constructivism: knowledge that is socially and culturally constructed (Gredler, 1997; Prawat & Floden, 1994) by interactions between people and their environment (McMahon, 1997). Learning occurs through social interaction with more knowledgeable peers (Lave & Wenger,

2000) and the context of learning provides for meaningful learning to occur (McMahon, 1997).

Communication in a group mode with negotiation is paramount.

Social Context for Learning: according to Harry Daniels (2007), in his paper ‘Pedagogy’ published in the *Cambridge Companion to Vygotsky*: the types of pedagogic practices currently being researched from a Vygotskian perspective. In the current study the phrase is used to elucidate the first aspect of the research framework of the study.

Social Organisation of Instruction: a phrase used by Vygotsky in his book *Thought and Speech* (1987) to capture how he saw the unique, cooperative learning relationship between adults and children. In the current study the phrase is used to elucidate the second aspect of the research framework.

Socially Mediated Communication: Vygotsky believed that mediation has a direct relationship with what he called ‘higher mental processes’. There are two aspects that he elaborated to define this understanding: (1) the involvement of human adult interaction and (2) the introduction of symbolic (Kouzlin, 2003) psychological tools or signs (Wertsch, 1990) within a social interaction or activity. In the current study the phrase is used to elucidate the third aspect of the research framework.

Visual Arts: a school subject in New South Wales. Defined in the curriculum as: ‘Visual Arts as a subject provides for various interpretations of the visual arts that are both contemporary and relevant. Acknowledging that Visual Arts encompasses the areas of art, craft and design, the subject is theoretically and practically sustained by practice, the frames, and a conceptual framework about art. These underpinnings form the basis for content and accommodate different student interests and abilities’ (Visual Arts Stage 6 Syllabus, 2009, p. 6). This term was used in the current study in relation to curriculum issues.

Visual Arts Education: as the current study was focused on an Australian curriculum, this term refers to art education from an Australian perspective or context.

Zone of Proximal Development (ZPD) – as defined in the research framework, as referred to in the design of the research component of the study, and as understood in a more contemporary sense: students' exposure to real-life settings for learning with adults. The term has been applied here as an overarching concept in relation to how interaction is understood to occur between adults and children in a learning experience, that is, through the use of leading activities and scaffolding (Gallimore & Tharp, 1990; Griffin & Cole, 1984).

The Structure of the Study

Chapter 1, above, provides an overview of the current study and introduces the setting in which it took place. The site was singularly placed within a school with an art collection that comprises works from an art prize. The Visual Arts Program at the school is designed to contribute to the student understanding of the art prize in terms of the practice of art writing. Chapter 1 further introduces the key aspects of the research framework, the problem the study investigated, and the study's objectives, significance, research questions, and its limitations. As seen above, the chapter also introduces key terms: their definitions and uses in this study.

Chapter 2 combines the research framework and literature review by applying the social constructivist approaches developed by psychologist Lev Vygotsky. The social context for learning, the social organisation of instruction, and socially mediated communication are three relevant aspects of his theory that are explained in this study. The literature review utilises this threefold framework to select relevant publications from a multitude. This was particularly useful when dealing with ICT education. The social context for learning establishes the role of schooling in the twenty-first century, social capital and the rise of technology. The literature review then explains the social organisation of instruction. This highlights the MOODLE environment, online learning,

interaction and the use of blended learning approaches in current ICT educational practices. Current online learning models relevant to this study are also presented and explained. Socially mediated communication in Visual Arts Education is explored through the concept of mediation, as presented in the studies of visual culture and meaning making. A focus on direct experience with art objects and art practitioners is presented to keep the focus of the literature within Visual Arts Education.

Chapter 3 establishes the research design, methodology and the conceptual development of the case study. The chapter offers a description of the methods, procedures, program content, and learning task organisation used in the study.

Chapter 4 highlights results and discussion points using three research questions as the organising structure, providing rich, detailed descriptions and interpretations of the data sources. The chapter also illustrates the data tools used.

Finally, *Chapter 5* outlines the relevance of the theories and research design of the study, draws preliminary conclusions from the summary of results, makes recommendations for the Redlands' School Visual Arts Department program, and suggests matters for further study.

CHAPTER 2: THE RESEARCH FRAMEWORK AND LITERATURE

Introduction: Social Constructivism and Technology in Art Education

In recent years, there has been much reflection from educationists on the process of teaching, learning and knowledge acquisition. The emergence of social constructivist epistemology has its origins in Vygotsky's perspective on cognitive development as being a product of social interaction. That is, learning takes place during shared communicative experiences with more knowledgeable peers or practitioners (Lave & Wenger, 1991), mainly through leading activities (Griffin & Cole, 1984) and assisted performance (Gallimore & Tharp, 1990). Vygotsky emphasised the social organisation of instruction within activity as a unique developmental relationship between children and adults, and between children and children. By situating individuals within specific social systems of interaction, relationships move from sign-mediated to socially mediated activity (Minick, 1987a, in Moll, 1990). The Vygotskian concept of the Zone of Proximal Development (ZPD) becomes evident in such collaborative activity when there is importance placed on constructing meaning (Vygotsky, 1978). It is important to note that Vygotsky was also interested in art and literature and wrote *The Psychology of Art* in 1925. He believed art to function as a vehicle for cognitive transformation. This was because of art's symbolic and cultural nature as 'a combination of aesthetic symbols aimed at arousing emotion in people' (Vygotsky, 1925, p. 253) and because of how humans react socially and emotionally to art objects. Meaning in art is constructed over time and often evolves to use 'symbolic codes and cultural conventions' (Sullivan, 1993, p. 11). For Vygotsky the use of these codes as psychological tools offers the mind an opportunity to expand 'basic emotions into higher psychological processes' (Adrian, Paez, & Alvarez, 1996, p. 108).

Vygotsky is best known for his application of social development theory and psychological inquiry to education. He is broadly understood to be the father of social constructivism. Social

constructivists believe knowledge is socially and culturally constructed. If learning is to be meaningful, the milieu in which learning occurs is fundamental to the process of learning itself (McMahon, 1997). The interactions with the environment, the learner's prior knowledge, impact on the outcomes of the learning process, subject-specific practices and the production of learning products (Reba, Selby, & Mentis, 2002).

Today, the rise of, and engagement with, technology supports the use of social constructivism in secondary schools. This is particularly so with online learning (Jonassen, Peck, & Wilson, 1999; Salmon, 2000), a construct that is being applied in subjects such as mathematics (Kennedy, 2005), science (Loughland, 2008; Ng, 2010; Pedretti, Mayer-Smith, & Woodrow, 1998), and the social sciences (Doolittle & Hicks 2003). Interestingly, Visual Arts Education seems to be under represented in recent research illustrating application of the principles of social constructivist thinking in education. It is contended that this is inconsistent as the historical foundation of art education has a long engagement with the concepts of meaning making, authentic practice, critical reflection and pluralist perspectives (Sullivan, 1993). Within the discipline itself, most research is conducted into artmaking. The practice of art theory, remains an underutilised area of research when drawing theoretical relationships to social constructivist epistemology. The current study is positioned in this research gap as an investigation of a social constructivist online learning environment, MOODLE, in a secondary Visual Arts Education setting.

SOCIAL CONSTRUCTIVISM: VYGOTSKY AND SOCIAL DEVELOPMENT THEORY

Introduction

Lev Semenovich Vygotsky (1896–1934) was a cultural psychologist and semiotician. Vygotsky's works are not typical of a psychologist as he wrote and lectured in many disciplines: the social sciences, philosophy, literature and art. Vygotsky was an intellectual who lived and worked in post-revolutionary Russia, when Marxist philosophical principles overruled most creative

thinking. Psychology for Vygotsky was cultivated within a Marxist tradition. The establishment of the ‘new society’ played a fundamental role in his thinking, specifically towards educational psychology. He was directed to reform Soviet psychology at the Psychological Institute of Moscow University in 1924. He took this responsibility very seriously and began intensively to research, test, develop and expound a theoretical approach to social psychology. For the next ten years he researched and wrote extensively until his untimely death at thirty-eight years of age from tuberculosis. Vygotsky was prolific, generating approximately 180 works. The political climate of his time and afterwards, suppressed publication of his work until well after Stalin’s death in 1956.

The elements of Vygotsky’s theoretical framework are not straightforward, and would be too vast to examine within the scope of this study. Rather, a thematic summation of his work is presented and educational elements relevant to this study are identified and described. The themes explored are the Social Context for Learning, the Social Organisation of Instruction, and Socially Mediated Communication. These elements form the research framework of the current study. As Vygotsky’s theories have been expanded by other psychological researchers, the examples used here often demonstrate a psychological point of view; however, the intention here is to show how the teaching and learning tasks developed in this study have been informed and constructed within Vygotsky’s three thematic structures. These are: (1) internalisation, instruction and transformation, (2) the ZPD, and (3) mediation and higher mental processes. Vygotsky’s themes will be shown to be relevant to contemporary education and the online structure.

The Appeal of Vygotsky’s Theories

Vygotsky considered cognitive development to take place in a social and historical context, often through collaboration or apprenticeship with others. The individual is understood always to be part of a group, whether a family, a school class or broader society. The development of the individual is entrenched in cultural traditions, society’s limitations and, most importantly, the use of language. On Vygotsky’s view, language is the catalyst within each individual where

developmental transformations can begin to occur. The individual experiences a process of internalising concepts. This process of development produces new functioning tools and skills for the individual to access when problem solving. Vygotsky's theory is driven by the need to understand social and individual processes. Semiotics is the hub in his theoretical approach, as language is the basis of both social and individual processes. Vygotsky understood that individuals could function within a sociocultural environment only. Today's sociocultural environment includes traditional forms of communication as well as technological advances in it. The internet offers a new cross-pollinated world and access to many cultures globally. Individuals are exposed to a blend of social communicative experiences, both face-to-face and online. Vygotsky's theories continue to be relevant to contemporary research into, and thinking about, social development because his view offers the researcher a position that is embedded in social activity when learning.

Social development is bounded by evolution and humankind exists as a collective that engages in similar aims and objectives to enable achievement and growth. The key features of Social Development Theory are interaction, organisation, leadership, and learning. Social development theory advocates that social interaction precede development. In other words, without interaction one cannot learn and progress in a group or into broader society. Research in psychology has traditionally focused on the individual. Research concepts often start with the examination and investigation of existing cognition in isolation from the context of society. Vygotsky's opposing approach – to study children within the context of school or group situations – was once not welcomed, although eventually psychological theorists re-visioned and re-contextualised his initial theories, bringing them to the forefront of psychological research that uses an ethnographic approach.

Vygotsky's work is relevant to the research framework in the current study as it positions language or mediation at the centre of development within a social context. In the current study, the

online community, textual dialogue (through signs and symbols), and the investigation of the mediation that takes place through them are at the centre of the research design.

A Brief Digest of Vygotsky's Work

As Vygotsky's works were written, and have been published, in Russian, non-Russian-speakers' reading and understanding of them can only be as effective as the quality of their translations allow. Many theorists have found extrapolating exact meaning and developing a clear theoretical approach from them to be problematic. Instead a thematic approach to understanding his work is accepted. James V. Wertsch has been helpful. His (1985) work, *Vygotsky and the Social Formations of Mind*, provides a detailed investigation of the theoretical approach advocated by Vygotsky. Wertsch outlined 'three themes that form the core of Vygotsky's theoretical framework (1) a reliance on a genetic or developmental method (2) the claim that higher mental processes in the individual have their origin in social processes and (3) the claim that mental processes can be understood only if we understand the tools and signs that mediate them' (Wertsch, 1985, p. 14).

Central to Vygotsky's theoretical framework is how he understood developmental processes that exist within human consciousness and thought. He was interested in the process of development rather than the product of it. This is evidenced in his writing in *Mind and Society* (Vygotsky, 1978). Development, on Vygotsky's view, is embedded in the 'transformation of forms of mediation' (Wertsch, 1985, p. 15), that is, the conversion of symbols in language. Mediation is at the core of Vygotsky's theory and it is the mechanism that produces higher mental processes. Through the use of psychological tools, people are able to have symbolic interaction with others that has meaning. Vygotsky also wanted to observe 'thinking' in the context of schooling and he was the first to integrate educational and psychological research. His interest in the construction and emergence of the ZPD in children is a key research theme that has been explored by many theorists since Vygotsky's death. (See 'Defining the Concept of the ZPD' later in this study for a detailed explanation.) Vygotsky's work offers an explanation of the social organisation of instruction and

how formal education becomes part of leading development. Vygotsky further detailed and described the function of scientific concepts and everyday concepts as ways of understanding and internalising the transformation of learning and development.

THE SOCIAL CONTEXT FOR LEARNING

The Role of Schooling

Vygotsky asserted that the social context for learning has a powerful relationship to teaching, instruction and cognitive development. Being both a teacher and psychologist he saw the necessity to study psychology within a formal school setting to help inform and formulate a research strategy or approach like the ZPD. Schooling for Vygotsky was fostered through mediated sociocultural activity (Moll, 1990) and interaction between teacher and student in a learning context or circumstance that had a positive impact on thinking and cognitive development. The aim of formal schooling and school subjects should be to give opportunities within social contexts for students to enlarge their own ZPD. This can occur only within a context that allows for proficiency in socially and culturally motivated and lead activities. Students need to possess the ‘cultural tools’ (Moll, 1990, p. 12) that allow them to participate successfully in interactive activities. The mental processing of these cultural tools is embedded in students’ sociocultural environment and the interactions that arise for students to learn. It is through the vehicle of speech and language that this process takes place. Vygotsky saw students as ‘elaborators of contents rather than receivers of instruction’ (Blanck, 1990, p. 50) and he saw that development occurs through interaction with a more competent peer or adult (Lave & Wenger, 2000). He also emphasised that it is impossible to separate the individual from the social (Moll, 1990) in this relationship. For Vygotsky, ‘co-operation and collaboration are crucial features of effective teaching’ (Daniels, Cole, & Wertsch, 2007, p. 311).

Vygotsky's theories on the role of schooling are salient for this study because they resonate with the key ideas of learning in a socially constructed environment online. Students engage in groups to complete activities led by art practitioners using both speech and language in text form within an asynchronous dialogue to mediate and communicate their understanding about artists and their artworks.

THE SOCIAL ORGANISATION OF INSTRUCTION

Instruction and Transformation

It was important for Vygotsky that the social organisation of instruction be placed at the heart of educational practice and that it institute the cognitive development of young children. Vygotsky wrote: 'the only good kind of instruction is that which marches ahead of development and leads it' (Vygotsky, 1986, p. 188). Instruction was understood by Vygotsky to lead development; it is directly linked to the process of mediation in learning and internalising new concepts. Vygotsky (1978) differentiated two types of instruction: 'scientific concepts', those learnt through organised instruction such as formal schooling; and 'spontaneous heuristics', those learnt in everyday experiences. The relationship between spontaneous and scientific concepts was characterised as polar opposites. Yuriy Karpov (2003) provided a thorough and useful explanation of the opposing nature of the two concepts as being unconscious/conscious, unsystematic/systematic, experienced learning/instructed learning. It is clear from these binaries that one cannot have one without the other, as spontaneous heuristics are the foundations for scientific concepts, which, in turn, become 'transformed into everyday life knowledge' (Karpov, 2003, p. 66; Moll, 1990). This transformation changes the role of spontaneous heuristics so that they 'become structured and conscious' (Karpov, 2003, p. 66). This demonstrates the interrelatedness of the two concepts, and when and how the 'influence of instruction on development is realised' (Vygotsky, 1987, p. 212).

Karpov also drew a connection between the nature of scientific knowledge and the creation of the ZPD's spontaneous heuristics. He referred to the work of Seth Chaiklin (2003) that will be discussed in the next section. One significant point that Karpov made was that Vygotsky believed that, once students acquire scientific knowledge, their thinking is mediated and problem solving can begin. Being able to reflect consciously is part of this process, giving students the capacity to become 'theorists rather than practitioners and develop the ability to operate at the level of formal-logical thought' (Karpov, 2003, p. 66). This would be the outcome of development led by carefully planned formal instruction.

Defining the Concept of the ZPD

Vagueness and ambiguity are two words that have been used to describe Vygotsky's definition and interpretation of the ZPD. In his writing, Vygotsky presented a brief definition of the ZPD as 'the distance between [a child's] actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under guidance or in collaboration with more capable peers' (Vygotsky, 1978, p. 86). This definition is the most direct explanation that Vygotsky offered on the topic as his untimely death precluded further elucidation. A survey of the applications of Vygotsky's research will help to understand how the concept has developed since his death. The following survey of definitions and applications however is by no means exhaustive. Nevertheless it illustrates the variety of interpretations in research that utilise the ZPD as a framework in a range of psychological, ethnographical and educational investigations. A review of the relevant literature reveals many key features appropriated and applied from the ZPD in practice. It is also important to note that the variety of appropriations of the ZPD in many applied theorists' works incorporate much of Vygotsky's theoretical approach to learning through instruction, mediation, internalisation, transformation and scientific conceptualisation to produce higher mental processes. Examples include the work of Campione, Brown, Ferrara, and Bryant (1984), Griffin and Cole (1984), Brown

and Ferrara (1985), Cole (1985), Moll and Greenberg (1992), Tharp and Gallimore (1988, Wertsch (1993), Meira and Lerman (2001), Chaiklin (2003), Verenikina (2003), and Rio and Alvarez (2007), which contributes to the development of a clearer understanding of the definition and function of Vygotsky's intentions and of the contemporary facets of the ZPD in practice.

The ZPD Used to Locate Individual Differences

Brown and Ferrara revealed that the ZPD is 'not just testing philosophy but rather it is a rich theory of socialisation' (Brown & Ferrara, 1985, p. 274).

They further defined ZPD this way:

A zone of proximal development is a map of a child's sphere of readiness, bound at the lower end by [the child's] existing level of competence, but at the upper end by the level of competence she can achieve under the most favourable circumstances. (Brown & Ferrara, 1985, p. 299)

Vygotsky hypothesised that all learning occurs in shared social experiences and that higher psychological processes materialise within the social interaction that occurs between adults and children especially. Brown and Ferrara identified internalisation as the key concept of Vygotsky's theory of cognitive development. Children's cognitive development emerges through a process whereby learning becomes apparent with the presence of others, typically adults. Problem solving moves from the social domain to the independent domain. Internalisation of this process occurs gradually and works from knowledge being:

- dependent on others
- guided by others
- supported by an adult or peer, while children gain understanding and take control of learning.

The adult/peer then takes on the role of guide or of someone who ensures the child's progress.

Learning occurs in two stages by: 'other-regulation', learning with aid; and 'self-regulation', using internalised methods to solve problems. Vygotsky's ZPD is located in the context of interactive problem solving that starts off as a shared experience within an activity where knowledge and skills are practised and gradually internalised.

Brown and Ferrara's research was concerned with examining the validity of Soviet methods of testing learning potential. To accurately identify an individual's ZPD 'requires a detailed task analysis of a suitable set of cognitive tasks and detailed task analysis of possible transfer probes' (Brown & Ferrara, 1985, p. 284). For Brown and Ferrara, a typical analysis of the extent of a ZPD is produced by 'how many prompts a [child] needs to solve problem 1, versus problem 2, versus problem 3' (Brown & Ferrara, 1985, p. 284). The ZPD demonstrates levels of interactive problem solving and the transfer of learning, that is, how fast children can transfer skills to new situations. What is identified in this type of testing is how rapidly a child gains knowledge, and how far the child can transfer the knowledge and skills to new situations.

A child judged to have a wide zone of proximal development is one that reduces the number of prompts needed from trial to trial, that is, who shows effective transfer of a problem to a new solution across similar problems (Brown & Ferrara, 1985, p. 284).

Brown and Ferrara summarised psychological testing methods and established tools that can define a child's ZPD. A profile of a child's learning potential can be isolated and the correct support for, or apprenticeship required within, activities can be calculated. Educational implications of the use of the ZPD are conclusive as Brown and Ferrara offered several points to consider. They asserted that developing tools to create learning profiles is paramount, and that defining and assessing children's learning domains is also important. When teaching and learning opportunities exist, instruction should be aimed at a student's 'upper' zone for effective knowledge transfer to occur. This facilitates the student's attainment of advanced levels of knowledge and skills more

efficiently than exposure to concepts aimed at existing accomplishments. For Brown and Ferrara, this educational practice is obligatory to ensure growth of a student's ZPD.

Campione et al. (1984) characterised the ZPD as 'the distance between the level of performance that a child can reach unaided and the level of participation that she or he can accomplish when guided by another, more knowledgeable individual' (Campione et al. 1984, p. 77). This position emphasises that the ZPD operates as a measure of individual differences in children. The researchers stipulated that Vygotsky used the ZPD to account for individual differences and they emphasised two points. Vygotsky, first, distinguished 'a child's actual developmental level, indexed by unaided performance on standard assessments (ability or achievement tests), and [secondly] the child's level of potential development (performance achievable with aid)' (Campione et al. 1984, p. 78). This ability to differentiate between various developmental levels allowed Vygotsky to perceive a child's achievement prospectively rather than retrospectively (Vygotsky, 1978). He was concerned with where students could go in their development rather than analysing where they were currently. The learning potential of children was at the core of Vygotsky's approach to utilising diagnostic testing strategies.

The ZPD as a Framework, Scaffold or Leading Activity

Michael Cole (1985) drew parallels between cognitive psychology and social anthropology to establish the criteria for a culturally grounded theory of cognition. He outlined Vygotsky's notion of the ZPD as a framework indicating the 'shifting control' or 'changing responsibility' (Cole, 1985, pg. 155) that takes place within a learning activity or task. Cole isolated this as a critical feature of the ZPD. He cited the work of Fortes (1970), Kulah (1973), Lave (1978), and Childs and Greenfield (1982), describing psycho-anthropological research that illustrates the concept of responsibility and shifting control amongst communities. Field examples in these studies came from non-western settings and cultures where apprenticeship is a typical method used to encourage learning. Cole stated:

The idea of a zone of proximal development, in terms of its general conception as the structure of joint activity in any context where there are participants who exercise differential responsibility by virtue of different expertise (Cole, 1985, p. 155).

Cole also identified instruction as an integral part of learning. The method and order of instruction is crucial for successful apprenticeship. The careful facilitation of the physical learning process can provide the learner with greater potential and more effective scholarship.

Cole summarised what he called ‘common ground achieved’ (Cole, 1985, p. 158) within research on the topic. The four main features of it are presented in column one of Table 1. The points are also relevant to the current study, with the second column signalling what could happen in an online Visual Arts educational setting.

Table 1: *How Cole’s Four Features of Apprenticeship Related to the Current Study*

Culture and Cognition	Relevance to this Study
1. The basic unit common to the analysis of both cultures’ and individuals’ psychological processes.	1. Common unit of a blended environment was used to analyse processes.
2. A unit consisting of an individual engaged in goal-directed activity under conventionalised constraints; examples variously designated as an ‘activity’, a ‘task’, an ‘event’.	2. Students were involved in online activities using the convention of the internet as a constraint; activities included events that motivated activities and tasks.
3. Where children are concerned, activities in this unit are peopled by others, namely adults.	3. Students engaged in dialogue with adults to complete online activities. The adults, artists and art teachers were (and are) experts in their field.
4. The acquisition of culturally appropriate behaviour is a process of <i>interaction</i> between children and adults in which adults guide children’s behaviour as an essential element in concept acquisition and accumulation, and education.	4. Teachers guided students in syllabus-appropriate language, netspeak, and content. Artists guided students in acquisition of concepts and knowledge directly related to cultural artworks. Interaction was developed linguistically through textual means in an online environment.

These four statements were determined by Cole to be common ground for analysts to adopt in their research in culture and cognition. Cole advocated that anthropologists view activities as the

foundation for 'internal activity' (Cole, 1985, p. 158) or as cognition studying 'social structure' (Cole, 1985, p. 158), while psychologists probe the associations within activities (social structures) in their effort to determine 'laws of internal organisation' (Cole 1985, p. 158). These various approaches to research highlight the different ways that cognitive acquisition of theoretical-type knowledge is achieved. Cole concluded by asserting a 'realization that in circumstances where we do not want to take the cultural content of activity as given, we now have common ground that can serve as the basis for a culturally grounded theory of cognition' (Cole, 1985, p. 158).

Peg Griffin and Michael Cole (1985), in their paper 'Current Activity for the Future: The Zo-ped', examined Vygotsky's ZPD, stating that his conceptualisation of it grew out of his rejection of standardised testing and the implications such testing had for children's development. Vygotsky contended that testing, including Intelligence Quotient determinations did not completely illustrate the development of a child and could not explain relationships between development and instruction. The process of instruction and its relationship to development is another key feature of the ZPD. Thus:

Instruction is good only when it proceeds ahead of development, when it awakens and arouses to life those functions [that] are in the process of maturing or in the zone of proximal development. It is in this way that instruction plays an extremely important role in development (Vygotsky, 1956, p. 278, in Griffin & Cole, 1985).

Examples of expansions on this important area of instruction were discussed through scrutiny of extended research on 'Next-step versions of the zo-ped' and 'scaffolding'. Griffin and Cole expressed the view that researchers using the ZPD view the phenomenon too narrowly in relation to the 'understanding [of] the social genesis of human cognitive processes and the process of teaching and learning' (Griffin & Cole, 1984, p. 45) that Vygotsky intended. Griffin and Cole are critical of the next-step process, and the work of researchers such as Hunt (1961), Turiel (1972) and Siegler (1981). Their interpretations considered the sequential steps that are involved in learning and problem solving. However, Griffin and Cole drew distinctions from next-step notions,

advocating rather that ‘Zo-peds’ are anticipated to epitomise numerous levels of an activity at the one time. For Griffin and Cole, understanding what has come before and what is coming next is an essential element of the ZPD. The authors advocated the need for apprenticeship in creating a scaffold within a real-life context or environment. A limitation of the next-step notion is also revealed as its not being able to ‘differentiate [this] on empirical grounds’ (Griffin & Cole, 1984, p. 47). Griffin and Cole went on to discuss that the metaphor of scaffolding as developed by Wood (1980) is not unlike the ZPD. However, the notion of scaffolding does not offer the researcher an avenue to view the changes in the child, therefore it could be limiting a child’s development of new goals. Griffin and Cole further advocated that ‘the scaffold metaphor leaves open questions of the child’s creativity’ (Griffin & Cole, 1984, p. 47). That is, children’s development is restricted by adult’s attained knowledge. From a more recent publication, Irina Verenikina’s (2003) paper, ‘Understanding Scaffolding and the ZPD in Educational Research’, set out to examine the many interpretations of scaffolding and its relationship to the ZPD through educational research. She sought to identify both the metaphor in action as well as its limitation in isolating a ZPD. She accepted that scaffolding is at the heart of the ZPD, citing a variety of interpretations, and consensus with Daniels (2001), Wells (1999), Berk (2002), McDevitt and Ormrod (2002), and Krause, Bochner, and Duchesne (2003). Her analysis was well balanced in detailing the strengths and the weaknesses of scaffolding within educational practice.

It is useful to summarise Verenikina’s investigation of applied scholarship and its contribution to understanding the relationship between scaffolding and the ZPD. For example, Gordan Wells (1999) identified three features of a scaffold:

- (1) the essentially dialogic nature of the discourse in which knowledge is co-constructed
- (2) the significance of the activity in which knowing is embedded
- (3) the role of artefacts that mediate knowing.

From these identified features, Wells understood scaffolding as a process operationalising the notion of the ZPD.

Mercer and Fisher (1993, in Wells, 1999) argued that a teaching and learning event should:

- (1) enable learners to carry out the task which they would not have been able to manage on their own
- (2) be intended to bring learners to a state of competence which will enable them eventually to complete such a task on their own
- (3) be followed by evidence of the learners' having achieved some greater level of independent competence as a result of the scaffolding experience.

Mercer and Fisher viewed 'the transfer of responsibility for the task as a major goal of scaffolding in teaching' (Verenikina, 2003, p. 2). Lave and Wenger (1991) were critical of scaffolding, advocating that scaffolding captures teaching performance as a one-way communication process when compared to the notion of the ZPD. Lave and Wenger interpreted the notion of scaffolding as 'limited compared to ZPD ... that emphasises teacher-learner collaboration' (Verenikina, 2003, p. 2).

Griffin and Cole (1984) continued also to investigate the work of Nicholas Bernstein (1966), Peter Anokin (1969) and Alexander Luria (1978) to further uncover an understanding of the ZPD. Bernstein brought to the discussion two main points – the notion of the model of future and past activities, and the concept of the functional system – as elements in the process of development. The second concept, functionality was further expanded by Anokin and Luria. Griffin and Cole stated:

From Anokin and Luria, we can see that the constituents of the Zoped, as aspects of functional system, will have flexible roles. The material, the task, the adults, the children, the models of the future, the models of the past, and the temporal arrangements all function together, as the needs and opportunities arise, to perform the function of development (Griffin & Cole, 1984, p. 49).

So the ZPD is dominated by many features and affected by input from all the components involved in a social learning situation. The resources and learning activity are unravelled through past experiences with the help of adult-and-child interactions that cite the acceptance of a common future understanding.

Griffin and Cole (1984) also introduced the idea of the 'leading activity'. Citing its origins in the work of Leont'ev (1981), the leading activity is related to a student's reality of functioning. With justified leading activities at the right time, the student's everyday functioning will be reorganised to incorporate the learning and understanding from the leading activity – in essence, internalising it. This act opens up the opportunity for a ZPD to exist. However, only students ready to accept the leading activities' outcomes will be open to develop their ZPD potential. The ZPD exists within the individual's functioning and need for growth.

On the back of these concepts, Griffin and Cole highlighted three points that they were concerned with in their research about the ZPD:

- (1) Learning activities provide for a notion of societally provided progressions in development.
- (2) The leading activities framework provides for:
 - 2.1 variations in frequency of experiences and psychological activity
 - 2.2 changes in leading activities, which can be related to the re-organisation of constituent actions and operations internally and inter-psychologically
 - 2.3 the appearance of new leading, activities which provides for the emergence of new, functional systems. (This allows for reorganisation and internalisation to occur.)
- (3) Leading activities allow for fundamentally important progression by reordering performances.

With these three concepts explained, Griffin and Cole asserted their position through examples in teaching, learning and development opportunities engaging the ZPD. Their research illustrated the emergence of the ZPD within leading activities amongst play, peer activities and work activities. They discovered that it is the leading activities framework sequencing that permits students at different levels to access the ZPD and develop their understanding of the learning activity.

The ZPD Interpreted as Assisted Performance and Symbolic Space

Similarly, Ronald Gallimore and Ronald Tharp (1990) explored the concept of ‘assisted performance’ as a notion mirroring learning and development when instituted within a ZPD. They were extremely critical of the then current education position and believed that teaching practices were controlled and narrow in allowing students and teachers to experience a ‘connected discourse’ (Gallimore & Tharp, 1990, p. 175) within interactive experiences. Gallimore and Tharp advocated the facets of ‘assisted performance’ to include modelling, contingency managing, feedback, instructing, questioning and cognitive structuring. Gallimore and Tharp’s work is significant as they presented a workable diagnostic model that is useful with both children and adults. Other writers have primarily focused on uncovering the ZPD in younger children who have not yet internalised learning processes. Gallimore and Tharp presented a four-stage model that visualises how learners progress through the ZPD. The authors presented a diagram to explain how this might happen through ‘performance assisted’ theory. Figure 3 illustrates the genesis of a performance capacity.

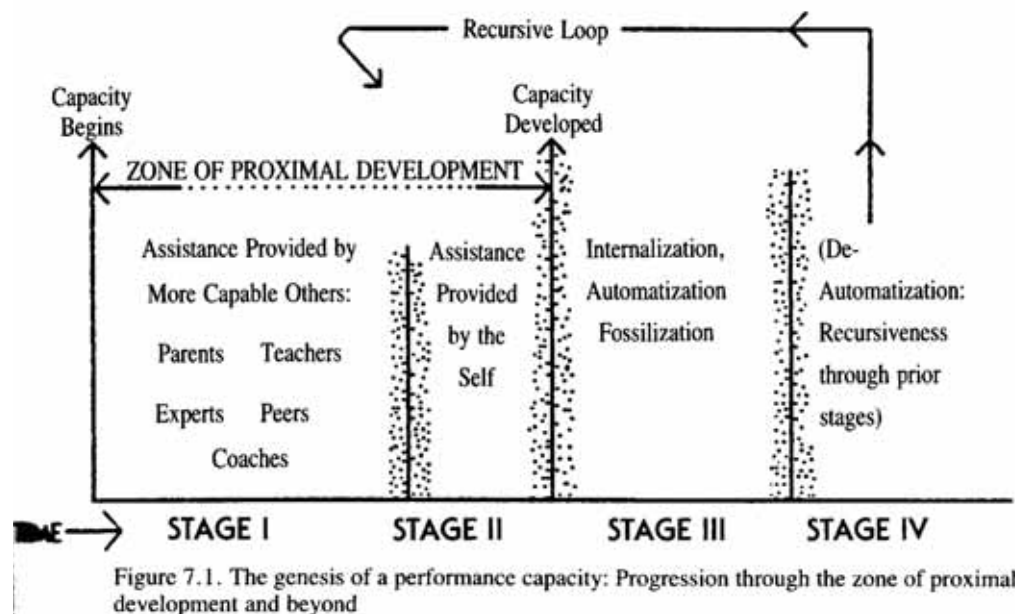


Figure 3: Gallimore and Tharp's genesis of performance capacity: Progression through the zone of proximal development and beyond. Image from 'Teaching Mind in Society: Teaching, Schooling, and Literate Discourse'.

The four stages will be briefly summarised here. Each stage in this diagram is interpreted as a zone that is determined by time and development, either with others or by the self.

- (1) Stage 1: Where performance is assisted by more-capable others: This is the stage where one learns by having assistance from others, the stage where children may start to take more responsibility for their learning. Tharp and Gallimore referred to Bruner's (1983) 'handover principle'. This is when a child moves from being an observer to an engaged contributor. Tharp and Gallimore described this as a 'transit from other-regulation to self-regulation' (Tharp & Gallimore, 1988).
- (2) Stage 2: Where performance is assisted by the self: This stage relates to the development of language, thought and action. Tharp and Gallimore defined it as '[t]he transfer from external to internal control ... [this] is accomplished by transfer of the manipulation of the sign (for example, language) from others to self' (Tharp & Gallimore, 1988). This stage refers to when a child realises self-directed speech. This was one of Vygotsky's

indicators for identifying the ZPD. Tharp and Gallimore stated that this is a significant and profound stage in learning and development.

(3) Stage 3: Where performance is developed, automatised, and fossilised: The terms

‘automatised’ and ‘fossilised’ are Vygotsky’s and demonstrate how he referred to the ongoing nature of the ZPD. Here Tharp and Gallimore revisited the terms to define them as signalling that self-regulation is internalised. They stated that ‘[t]his is a stage beyond self-control and beyond social-control. Performance here is no longer developing; it is already developed.’ (Tharp & Gallimore, 1988, p. 38). This is when task learning becomes fixed.

(4) Stage 4: Where de-automatisation of performance leads to recursion through the ZPD:

This stage allows for the ongoing nature of learning and development in Stages 1 to 3 to be expressed. This means the cycle of reliance on ‘self-assistance and other assistance ... provides for enhancement, improvement, and maintenance of performances’ (Tharp & Gallimore, 1988, p. 39). ‘De-automatisation’ is the term Tharp and Gallimore used to refer to instances of loss of development: ‘What one formerly could do, one can no longer do’ (Tharp & Gallimore, 1988, p. 39). This is how Tharp and Gallimore justified the need for a fourth zone. They proceeded to give examples of Stage 4, articulating that ‘making self-speech external is a form of recursion often effective in restoring competence’, ‘hearing the voice of the teacher’ and ‘the teacher ... repeat[s] some earlier lessons’ (Tharp & Gallimore, 1988, p. 39) constitute the engagement of Stage 4.

Assisted performance is a process by which less competent others develop and internalise their task and skill development. For Tharp and Gallimore the ZPD is not necessarily a sequential experience; rather it is a recursive performance that has the capacity to engage learning and development within the concepts of self-regulation and other-regulation. The constant shifting between the two concepts is an important aspect of the ZPD.

Luciano Meira and Stephen Lerman (2001) offered a thought-provoking view on the ZPD, claiming that it should be appropriated as a 'symbolic space'. This was elucidated as having close ties to Vygotsky's intentions 'that all development of the individual comes about through sign mediation in activity' (Meira & Lerman, 2001, p. 1). Their belief that symbolic space is created not physically but through the ways people communicate was developed in their research and presented as two discursive contributions:

(1) Content-orientated language – for content-specific material;

(2) Communication-orientated language – for:

2.1. interventions made by the teacher which orientate the child towards the new stage in her or his life, that of schooling (Davydov, 1988);

2.2. interventions made in speech or gestures by the child or the teacher towards (i) reducing communication gaps and ambiguities in speech, (ii) self-regulation, (iii) calling for and demonstrating attention, and (iv) building relations between past, current and future events or actions (Meira & Lerman, 2001, p. 7).

These two contributions were explored within the early childhood classroom in three episodes where teacher and student interactions occur. The first contribution is concerned with the teacher's educational objectives and the student's motivation towards attaining theoretical knowledge in particular fields. The second is concerned directly with the communication between the teacher and the student within the context of activity. Meira and Lerman acknowledged that, in this type of investigation, 'inferences' may need to be made about certain participants' intentions and that the symbolic space of the ZPD is emergent within the unfolding process of the activity. Meira and Lerman advocated the ZPD to be a 'symbolic space for interaction and communication where learning leads development' (Meira & Lerman, 2001, p. 8). This was aligned in their paper with Vygotsky's thinking and that of Newman and Holzman (1993), and van der Veer and Valsiner (1993).

Meira and Lerman argued that a ZPD is an emergent tool that accesses instances of learning within the classroom by emphasising the symbolic value of semiotic interchanges. These learning instances, or ‘socio-interactional situations’, permit the ZPD to engage when ‘sign-mediations as tools for action’ (Meira & Lerman, 2001, p. 3) are utilised in activities. The investigations of the episodes in Meira and Lerman study identified yet another facet of the ZPD. ‘Opportunistic instruction’ was noted as a factor in how teachers may ‘call up’ the ZPD in teaching a concept through activity. Opportunistic instruction relates to what the student brings to the learning instance with their knowledge background or questions being included in the development of the learning. Conclusively, for Meira and Lerman:

the opportunity and possibility for learning in the zone of proximal development does not exist prior to an event or activity. The zone emerges (or not) as the activity unfolds and it is of no value to speak of the ZPD in a generalized, context-independent form. We conclude by suggesting that all development of the individual comes about through sign mediation and that, if we are to use Vygotsky's concept of ZPD fruitfully, we ought to recast it through the careful study of ever-emergent spaces of content-orientated and communication-orientated language (Meira & Lerman, 2001, p. 20).

This interpretation is remarkably different from that of previously discussed researchers, such as Campione et al. (1984), Griffin and Cole (1984), Brown and Ferrara (1985), and Cole (1985).

A Critique of Current Notions of the ZPD

Interestingly, Seth Chaiklin (2003) in his paper, ‘The Zone of Proximal Development in Vygotsky’s Analysis of Learning and Instruction’, provided a summative survey and critique of the common types of conceptions of the ZPD. He identified three types of conceptions of the ZPD: (1) Generality Assumption: applicable to learning in all kinds of subject matter; (2) Assistance Assumption: learning is dependent on interventions by a more competent other; (3) Potential Assumption: learning becomes the property of the learner and permits the best and easiest type of learning. Chaiklin then established why the ZPD uses development and not learning as its process

and drew a relationship to ‘age periods’(Chaiklin, 2003, p. 48) of child development that Vygotsky believed informed the ZPD. Chaiklin established that a contradiction in the age period of development can exist in an environment of social situations only. The age periods are ‘historically and materially constructed’ (Chaiklin, 2003, p. 48). He further elaborated on this maturation point to state that there is a ‘leading activity’ for each period of maturation.

The notion of the ‘leading activity’ is a way to identify the particular relations in the social situation of development that are likely to contribute to the development of the functions that lead reorganization of a child’s psychological functions (Chaiklin, 2003, p. 47).

Chaiklin saw two purposes for the successful interpretation and use of the ZPD as a model for psychological evaluation. He explained that, first, the ZPD ‘identifies the kinds of maturing psychological functions and (social interaction associated with them)’ that play an important role in moving children from one ‘age period to the next’ (not based on time or their actual age) and that, secondly, the ZPD also ‘identifies the child’s current state in relation to developing ... functions needed for [this] transition [to take place]’ (Chaiklin, 2003, p. 49). Chaiklin expanded the ZPD model analysable in two broad study areas of maturation. He labelled and defined the Objective Zone of Proximal Development as ‘reflect[ing] the psychological functions that need to be formed during a given age period in order for the next age period to be formed’ (Chaiklin, 2003, p. 49) and the Subjective Zone of Proximal Development as ‘[a] person’s ability to imitate’, reflecting a new theoretical shift in the meaning and position of imitation, ‘in which imitation presupposes some understanding of the structural relations in a problem that is being solved’ (Chaiklin, 2003, p. 51). Chaiklin made a further distinction and application of the term ‘imitation’ and its relationship to the ZPD.

The crucial assumption is that imitation is possible because (a) maturing psychological functions are still insufficient to support independent performance but (b) have developed sufficiently so that (c) a person can understand how to use the collaborative actions (e.g. leading questions and demonstrations) of another. The presence of

these maturing functions is the reason the zone of proximal development exists. Alternatively, one can say that the zone of proximal development is defined as referring to those intellectual actions and mental functions that a child is able to use in interaction, when independent performance is inadequate (Chaiklin, 2003, p. 52).

Chaiklin was critical of current educational uses of the ZPD in ways limited to one aspect of the zone and of the misguided use of the term itself within research. Nor did he support metaphorical or symbolic interpretations. Chaiklin valued applications where the ZPD is believed to be created, through opportunities of interaction where maturation cannot be attained autonomously.

While Vygotsky intended the ZPD to be used as a method for educational evaluation, it has also been identified as a process for learning that bridges the gap between current and potential development of students within his ‘genetic-cultural theory of higher [mental] functions’ (Rio & Alvarez, 2007, p. 278). Vygotsky saw his concept of the ZPD as ‘open and divergent’ (Rio & Alvarez, 2007 p. 278) rather than as a linear interpretation where milestones are reached through maturation. Instead, Vygotsky believed the progression of development to have dynamic multiple paths that lead to potential development when undertaken in a true ZPD experience. The ZPD is emergent, finding the links ‘between the situated-embodied mind and the cognitive mind, the individual mind and the social mind, the development already attained and the development to be attained’ (Rio & Alvarez, 2007, p. 301). This multiplicity of the ZPD develops a rich and diverse theory of the mind.

A contemporary understanding of the ZPD in educational practices is analysed as a developmental strategy such as establishing a learning profile that can allow the student to gain experience within subject-specific skills and knowledge, facilitating further development beyond their potential. The concept is characterised by real-life settings for learning. The learner is established as an apprentice within a learning environment, where student interactions become a focus for learning and social development. Adult support, instruction and scaffolding are integral

parts of moving students from dependent to independent interaction, while enhancing a student's ZPD. The concept of internalisation is rooted within its structure. Known performances and procedures that students are comfortable completing are internalised and recalled within a new context. This new situation requires students to use known skills and knowledge in a new way. Transformation of this knowledge occurs when students make the transition from one known experience to another unknown experience without difficulty. The structure and organisation of learning activities becomes important. Leading activities provide a vehicle for potential development to occur. The task or activity should also have instruction and interaction from a teacher or adult who sets goals and guides the activity.

The theoretical discussion and contemporary understanding of the ZPD directly influenced the design of this study. However, the use of the ZPD in the study is limited to its being an overarching concept in relation to how interaction is understood between adults and children in a learning experience. In Chapter 3, 'The Research Design and Methodology', the use of the ZPD will be outlined in the context of this study and explained in relation to its purposes.

SOCIALLY MEDIATED COMMUNICATION

Mediation and Higher Mental Processes

An important facet of Vygotsky's theoretical framework is his explanation of mediation and its relationship to higher mental processes.

All higher mental functions are mediated processes. A central and basic aspect of their structure is the use of sign as a means of directing and mastering mental processes ... [higher mental functions] are an aspect of the child's cultural development and have their source in collaboration and instruction ... initially these [higher mental] functions arise as forms of collaborative activity. Only later are they transformed by the child into the sphere of his own mental activity. (Vygotsky, 1987, pp. 126, 213, 259 as cited in Daniels, 2001, p. 48,)

Vygotsky believed that higher mental processes are either mediated through involvement of an adult or the introduction of symbolic (Kouzlin, 2003) ‘psychological tools or signs’ (Wertsch, 1990, p. 114) within a social interaction or activity. These two aspects of mediation are inherent in the activity that takes place in the social cultural milieu. Human involvement is vast and difficult to classify as these types of interactions are plentiful and varied; however, symbolic uses of tools are evident in current educational practices such as writing, formulae, graphic organisers, scaffolds (Kouzlin, 2003) and artworks (Efland, 2002). Human engagement with these sign systems (Cole & Scribner, 1978) are ‘internali[s]ed result[ing] in behavioural transformations’ (Efland, 2002, p. 32). Vygotsky examined mediation through the signs and symbols of communication. His main concern was the relationships between thinking, speech and the development of language use in social and individual activity. The way children internalised the signs and symbols or psychological tools of a culture to access higher mental functions has been the focus for debate and elaboration by many psychological theorists: Bower (1974), Gibson and Walker (1984), van der Veer and van Ijzendoorn (1985, as cited in Daniels, 2001), Baillargeon (1987), Davydov (1988), and Ratner (1998).

In contemporary times, socially mediated communication and interactions are not occurring just in face-to-face events, but are present in new, online environments to include examples such as email, chat rooms (synchronous or asynchronous discussions), virtual worlds—gaming, and worldwide web and mobile communications. These interactions are known as computer-mediated communications, or CMC. Within online environments, language has become transformed, even deconstructed. Language is in constant transition, with evidence of emerging and changing rules of engagement. The development of online language interactions or ‘netspeak’ can be defined as using both speech and writing acts to communicate (Crystal, 2006). The use of this type of language is often in a dialogue and is typical of writing out one’s thinking through a discussion. The language used is commonly not precise, seen as ‘narrower in range of vocabulary’ (Baron, 1984, p. 131, cited in Herring, 2001) and simplified to ‘economise on typing effort [and to] mimic spoken language

features' (Herring, 2001, p. 5). What is different in communicating in this new social milieu is the 'rhythm of an internet interaction [being] very much slower than that found in a speech situation [; this] disallows some of conversation's most salient properties' (Crystal, 2006, p. 33). However, in an asynchronous setting, the process of editing and formatting text can allow for considered responses that are quite different from spoken words. Incongruously, in synchronous dialogue, the use of expressions such as emoticons to demonstrate oral speech is a common feature (Herring, 2001). To warrant a new set of communicative signs and symbols relevant to the new social milieu of the online environment, a new culture is established and internalised by users through the act of participating with others in social or learning communities. The research design of this study reflected the uses of online environments to study and reveal student-teacher and student-artist interactions. A new culture of engagement emerged within the school, which previously did not participate in this type of computer-mediated communication.

Art, Cognition and Mediation

The next section of the research framework utilised the work of Arthur Efland (2002) in *Art and Cognition*, where he explored the psychological differences as presented in the theories of Piaget's behaviourism and Vygotsky's sociocultural cognition. In Efland's quest to redefine and position the cognitive application, principles and implications of the multiple theories, he used the Visual Arts context to illustrate aspects of theories such as mediation. He made a comparative analysis of a range of conceptions of cognitive development and used the work of both Piaget and Vygotsky to plot a path towards an integrated theory of learning for art education. In the chapter, 'Artistic Development in Cognitive Developmental Theories', Efland used Piaget's work and Vygotsky's work to frame children's artistic development within cognitive development. Efland used the studies undertaken by a range of researchers who utilised children's drawings and graphic expression to develop his discussion. To position the actions of the mind in art as cognitive in nature, Efland, referred to the work of pre-cognitive theorists such as Herbert Read (1945) and

Viktor Lowenfeld (1952), who explored the value of emotional development in meaningful creative activity. Efland contributed to the case that art is not just emotional activity by utilising the work of Rudolf Arnheim (1954), who argued that perception is a cognitive function and has ‘meaningful problem-solving activity’ (Golomb, 1992, p. 325, in Efland 2002, p. 45). This has not always been the case as, for Piaget, art functioned outside the realms of scientific thinking (Efland, 2002, p. 42). Efland also illustrated the sociocultural position of drawing in development and drew on the work of Brent and Margaret Wilson (1982). He asserted that their work challenged Arnheim’s central premise and also provided a different position from Lowenfeld’s through the use of Wilson’s studies of imitation in children’s drawing. This was an important point as they ‘claim[ed] that graphic representations of children are efforts to mirror the social conventions provided by their culture’ (Efland, 2002 p. 46). Imitation is the vehicle for this learning.

Lastly, Efland commented on multiple repertoire theories, citing the work of Dennie Wolf, Martha Perry (1988), and Anna Kindler and Bernard Darras (1998). Artistic development in this work was dependent on the ‘expressive intent or purpose of drawing and ... setting in which it is made’ (Efland, 2002, p. 47). This approach exists in culture and functions within it. Through this discussion, Efland maintained that art contributes to the development of the mind and that graphic development should verify this. However, in his overview of the theories in his chapter, he concluded that ‘theories of drawing development tend to parallel the changing theories of cognitive development’ (Efland, 2002, p. 51). Mirroring or emerging patterns highlight the interpretive trends in the theoretical relationships between psychology and art education.

Efland (2002) reviewed mediation and its implications for art education. In his theory, he represented mediation in the Visual Arts by applying Vygotsky’s significance of tool utilisation. Efland observed that Vygotsky propounded his theories at the same time as the art creative self-expression movement began to develop – a movement where ‘teaching was structured around an idea of freedom, specifically freedom *from* adult intervention which was regarded as interference’

(Efland, 2002, p. 37, italics in original). He illustrated this through the notion of the kindergarten and related it to Vygotsky's biological metaphor. This approach to art education would have been considered in Vygotsky's terms as being too restrictive or inactive, leaving students at their 'actual development' (Efland 2002). Efland recognised that the strength of Vygotsky's theory is grounded in social mediation as the vehicle for learning. Knowledge is culturally specific and gathered through experience with others. He pointed to Ernst Kris to highlight this point as it exists in art history:

we have long come to realise that art is not produced in an empty space, that no artist is independent of predecessors and models, that he no less than the scientist or the philosopher is part of a specific tradition and works in a structured area of problems (Gombrich, 1960, p. 30, as cited in Efland, 2002 p. 39).

Efland went on to outline three implications for art education: the first, that art should be studied in its social context; the second, that language and additional societal representations are devices that enable human development to move forward; and the third, that learning involves the 'internalization or enculturation of knowledge' (Efland, 2002 p. 49). These three implications are conveyed through the acts of socially mediated communication. Efland proceeded to question the cognitive revolution and concluded that there is a need for an integrated approach to cognitive theory.

An integrated theory would have to adopt meaning making and understanding as its organising principles, as opposed to computational competence or information processing. The principal effect of this would be seen in educational activities where the symbolic forms of the arts would be more closely linked to everyday life, and where the meanings one grasped about art would be seen and felt to be linked to the life world (Efland, 2002, p. 79).

Efland progressed further in his next chapter, 'The Cognitive Revolution and Conceptions of Learning', where he analysed three cognitive perspectives: (1) symbol-processing, (2) sociocultural

and (3) integrated. He investigated the three positions from an art educational point of view and provided a set of conditions required for an integrated cognitive theory that would be suited to art education. Through his investigation, he established that there are shortcomings to both the symbol-processing and sociocultural positions. Efland advocated taking an integrated position to 'harmonise' the practices of art educators (Efland, 2002). An integrated theory asserts that the nature of learning would be emphasised through 'meaning making', that strategies for learning are both 'metacognitive' and 'facilitated'. The nature of knowledge is 'constructed ... within a cultural context with cultural tools'; this includes 'language, number and works of art'. The organisation of knowledge is 'motivated and purposeful' and 'meaning' is found when 'learners integrate knowledge into their lifeworlds' (Efland, 2002, pp. 80–81). Meaning making (Efland 2002; Sullivan 1993) is a central characteristic of art education.

Mediation in Content and Curriculum

Educationists such as Graeme Sullivan (1993) and Kerry Freedman (2003) offered a way forward in providing a broader contemporary position for art education in psychology, cognition and culture within a social context. These writers referred to key concepts and theories that are comparative and useful in the analysis of socially mediated communication within the context of art education.

Art education has developed within the milieu of visual culture. The definitions and interpretation of visual culture are diverse and debated, much like the definitions of art (Freedman, 2003). Kerry Freedman's starting point in her book, *Teaching Visual Culture*, was significant for this definitional debate. She stated:

An education in the visual arts takes place in and through the realm of visual culture ... through objects, ideas, beliefs and practices that make up the totality of humanly conceived visual experience; it shapes our thinking about the world and leads us to create new knowledge through visual form (Freedman, 2003, p. 2).

The creation of this new knowledge can be demonstrated in the monological mediation of artworks and the ‘social relationships [formed] between and among makers and viewers’ (Freedman, 2003, p. 3) of art. It is accepted that this interactive relationship in part is a manifestation of ‘social production’ that is captured in mediation that is quasi-interactive (that is, one-way mediation).

Freedman positioned the concept of mediation in two ways. At the level of teaching ‘content ([as] mediate[d] between makers and viewers) [and] curriculum development and enactment’ (Freedman, 2003, p. 4). She defined curriculum as being established within interactive moments amid students and a diverse set of individuals via texts and images. Interpretation of objects and their representation through text and images are of paramount importance to the teaching and learning of art education. What is important to note with Freedman’s understanding of interpretation is that, often, it can be skewed by ‘interpreting an interpretation’ (Freedman, 2003, p. 5).

The interpretation of newly encountered images is based on meanings that have been defined through the previous use of related signs. This intergraphical process is didactic because it involves meanings that are learned and taught by social groups (Freedman, 1994, in Freedman, 2003 p. 5).

This culturally historical, experience-based relationship to understanding in the Visual Arts resonates with the design of the program of work offered by the current study. The program engaged students directly with art objects, with written historical references about the objects, and with the art practitioners themselves. To establish the relevance of Freedman’s work in art education and to highlight the continuing role visual culture plays in the learning processes of adolescence, Freedman’s most recent (2011) unpublished project ‘Art Education and Visual Learning Networks: Lessons about Creativity and Cognition from Autodidactic Visual Culture Communities’ has also been referenced.

Sullivan, in 'Art-Based Art Education: Learning that is Meaningful, Authentic, Critical and Pluralist' (1993), set out a framework of art-based art education outcomes that may impact on contemporary art education by drawing on parallels in psychological research, educational inquiry and contemporary art practice. Sullivan advanced meaning making, authentic practice, critical reflection and pluralist perspectives as characteristics of a contemporary art education.

He identified the shift in psychological research as represented by 'the way individuals process information to the way meaning is constructed' (Sullivan, 1993, p. 6). Sullivan asserted that the construction of meaning as a basis for art education is present in both artmaking and theory. He went on to outline the significance of meaning and its relationship to context using Vygotsky's argument that exposure to culture impacts on the developing human mind. Sullivan quoted the work of Cole and Scribner (1974), Cole (1990), and Rogoff (1990) to emphasize the directional changes from clinical psychological research to real-world settings and episodes as sites for sociocultural studies. He went on to set out the conception of intelligence as multidimensional. Sullivan explored this concept using Robert Sternberg's (1990) metaphors of the mind.⁵ Out of the seven metaphors a sociological metaphor 'highlight[s] the important role immediate family, caregivers, and other social groups play in the development of intelligence.' This view incorporates the notion of "shared cognition" which asserts that people co-construct their intellectual response to the world through group connections, peer interactions and mutually arrive[d] at understandings' (Sullivan, 1993, p. 7).

Sullivan also expanded Sternberg's theory by adding an eighth, technological metaphor. This is important as it links the human mind with exposure to intelligence via external stimuli, as in the notion of 'distributed intelligence' (Perkins, 1992, in Sullivan, 1993, p. 8). Sullivan further advocated that learning be defined as a process of participation and interaction and that it be conceived through the notions of 'apprenticeship (Rogoff, 1990) and situated learning (Lave &

⁵ Sternberg's seven metaphors include geographical, computational, biological, epistemological, anthropological, sociological and systems metaphors.

Wenger, 1991)' (Sullivan, 1993, p. 8). This relationship of knowledge acquisition has moved from narrow conceptions about which fundamentals students should know to 'teaching for understanding' (Sullivan, 1993, p. 8). With these theories and positions about learning in mind, Sullivan drew relationships between art education and contemporary art practices. He contended that artmaking remains at the centre of this relationship and that art writing emerges as a form of influence in critical discourse.

While artmaking remains at the epistemological and ontological centre of the field this is further articulated by the emergence of a significant genre of art writing that incorporates a variety of perspectives of critical discourse about art and culture (Sullivan, 1993, p. 10).

Sullivan further demonstrated how the nature of postmodern practice is relevant to a twenty-first-century art education, presenting four characteristics that are useful to understanding the position of art education within contemporary art and culture:

- (1) A Sense of Meaning – a phrase defining meaning as changing, interpretive and dependent on certain conditions, location and context. Sullivan drew a comparison between language and the Visual Arts, 'subject to scrutiny [of] symbolic codes and cultural conventions' (Sullivan, 1993, p. 11), providing meanings that are socially constructed. He identified that meanings in Visual Arts are also re-workable, so viewers understand artworks. Multiple meanings are also possible and postmodernism offers the vehicle for this. Meaning is also directly positioned in the historical aspect of the Visual Arts as he gave examples of how historians such as John Berger and Linda Nochlin demonstrated how representation encompasses concepts that 'reflect social structures and how each society at every phase of its existence makes its own meaning. In this context individual expression as represented in images and objects is also descriptive of broader overt and covert social dimensions' (Sullivan, 1993, p. 12). Meaning was also

conceived collectively, with participation in collaborative opportunities where artistic meaning is referenced, created and recreated. Sullivan gave two examples where learning and interactions with artists provide ‘profound learnings’: artists-in-schools programs and artist-run workshops. Meaningful interactions with art practitioners can shape the depth and direction of communication and, in turn, the learning that takes place. What is significant about meaning making is that it ‘has long been acknowledged as a principal premise in art education’ (Sullivan, 1993, p. 15).

(2) A Sense of Connection – Sullivan explored the changing connection between the evolution of knowledge and how it is revealed in a cultural or social perspective. He utilised artmaking and art-critical examples to highlight the need for authentic practice. The example used by critic Mary Eagle’s (1990) ethnographic approach to research artworks was directly related to the current study. She ensured that she had various perspectives on which to base her understanding of works and the artists who created them. Eagle’s method of direct experience with the artwork then a discussion with the artist echoes the process that was taken in the program design and online component of the unit of work designed for this study. Eagle’s critique was structured from these various experiences within the context of the contemporary art world. The notion of differing perspectives allows for connections to be made and a deeper critical understanding to be achieved authentically. It is valuable to note that the art-critical process has not been used often to impose a sense of connection within art education.

(3) A Sense of Doubt – which Sullivan framed within contemporary art practice and regarded as constituting the process of critical reflection. Sullivan referenced postmodernism as the site for this and claimed that ‘the reasoning behind critical reflection is a general distrust for many of the social, political, economic and cultural claims [that are] made in the name of progress’ (Sullivan, 1993, p. 13). Sullivan

examined critical art practice within the theories of feminism as a way of ‘critiqu[ing] social and cultural relations’ (Sullivan, 1993, p. 13). The educational value of critical skills were also determined as being necessary; art education offers an important opportunity for critical reflections and conversations within the context of studying art.

- (4) A Sense of Perspective – provides for pluralist perspectives that are dominated by multi-dimensional intelligence. ‘By embracing diverse social and cultural domains the integrity and relevance of different perspectives is not only made apparent, but when artists and art writers operate at the intersection between cultures telling insights, connections and dislocations are revealed’ (Sullivan, 1993, p. 15). Viewpoints are established through art practices that confront and challenge. Educationally this characteristic holds merit, as it offers the right set of circumstances for deploying non-traditional or alternative forms of assessment.

Sullivan drew connections between artistic thinking, art practices and their implications for human development. His paper was significant for this study as it positioned the many facets of art education at the cutting edge of learning and development within the emerging constructivist traditions. Sullivan brought together the notions of psychological research, educational inquiry and contemporary art practices as possible avenues for social constructivist interactions. Sullivan’s closing statement surmised how art education can achieve meaningful interactions: ‘If art education is to be reconnected to art and life it has to be meaningful to the student, grounded in authentic practice, foster critical and reflective attitudes and pursue pluralist perspectives’ (Sullivan, 1993, p. 19).

The Relevance of Vygotsky’s Theoretical Framework

Vygotsky’s theoretical framework situates the construction of meaning within interactions with others as the vehicle for cognitive transformation (Vygotsky, 1978). The context for learning

and instruction is socially engaging, enabling successful mediation. It is through mediation that internalising of new enculturated concepts occurs. This can be supported in a number of ways through the performance of a ZPD experience by developing learning potential, isolating individual differences, providing opportunities for apprenticeship and by engaging scaffolding, leading activities, and assisted performance. These characteristics in various ways can play a role in the development of frameworks for teaching and learning, as in Sullivan's art-based art education framework and Salmon's Five-Stage Model. The outcome of engaging such frameworks and models in teaching and learning experiences is that cognition becomes shared, situated and then distributed. Meaning making becomes the central premise for all learning interactions. Efland (2002) called to extend this to an integrated theory that harmonises the teaching and learning practices for art education. The following section reviews contemporary literature and discusses the three aspects of the research framework. These include the Social Context for Learning, the Social Organisation of Instruction, and Socially Mediated Communication – in Visual Arts Education.

CURRENT LITERATURE: THE SOCIAL CONTEXT, INSTRUCTION AND MEDIATION

The literature review in this section focuses on publications relevant to the focus of the current study, which were to create and investigate a blended learning environment within the context of Visual Arts Education in New South Wales. The researcher first locates three aspects of the research framework within the broad context of Australian education and schooling, then identifies the social context for learning, and reviews a selection of current policies and publications on twenty-first-century learning and teaching in Australian schools. The review gives a background to the changing role of schooling through the shifts in the knowledge economy and its impact on teaching and learning, while social capital with its relationship to technology and the emergent (new) Australian Curriculum is also discussed. The application and integration of ICT will then be explored to identify relevant online learning environments, frameworks, theories and blended learning approaches as possible vehicles to attain the goals of providing a twenty-first-century

education in Australian schools. Examples are cited from distance education, connecting with the utilisation of MOODLE as a site supporting online and blended approaches to teaching and learning.

The second part of this section identifies literature dealing with the social organisation of instruction which has informed the focus of method and design of the study by exploring and defining the key concepts including online learning theories (Salmon, 2002, the MOODLE environment, interactions online and blended learning approaches. Examples cited are papers found within primary and secondary school settings. They are limited and typically focus on subjects such as science, languages, ICT.

The third and final part of this section attempts to apply socially mediated communication in art education. This is an undervalued and understudied area. After a review of the literature, the major focus turns to the positioning of mediation in art education within the contemporary understanding of visual culture. This is presented through Kerry Freedman's writing on the subject, *Teaching Visual Culture* (2003), and demonstrated using Graeme Sullivan's paper, 'Art-Based Art Education: Learning that is Meaningful, Authentic, Critical and Pluralist' (1993), where he drew connections between artistic thinking, art practices and their implications for human development. Arthur Efland's *Art And Cognition* (2002) will also be explored as he offered a cognitive perspective on mediation in art education and directly referenced the work of Vygotsky and Piaget.

The Social Context for Learning: A Background to the Changing Role of Schooling in Australia

A noticeable shift in education and schooling has emerged as the developed world enters what has been coined the 'knowledge economy' (Australia Council of Deans of Education [ACDE], 2004). The integration of teaching, learning and technology is becoming the central governing notion in our changing society. The context for learning is more flexible and influenced by the ever-changing amount and type of communication or interaction that takes place in schooling. The

Australian Council of Deans of Education, in the paper ‘New Teaching, New Learning: A Vision for Australian Schools’ (2004), provided a summary of old and new ideologies as viewed within world economies and educational practices. The ACDE provided a new approach to understanding education, its position in society and the changing role of schooling.

The Council believes that education will become more important not only to economic success, but to the preservation of social cohesion and democracy. The new economy will demand highly trained workers, autonomous learners and citizens both well connected and secure in their identity. Skills of collaboration will supersede the competitive skills required in the old industrial economy, and the focus will shift to interpersonal relations and communications. Our present education system is simply not prepared to meet these demands of the new economy, and requires substantial qualitative changes on top of greater public investment (ACDE, 2001, p. 9).

In light of the assertions made by the council about contemporary education, the council advanced eight propositions outlining initiatives behind a knowledge economy and what they mean for new learning and the role of education in the twenty-first century. Propositions 4 and 5 are relevant to the current research: Proposition 4 contends that *A ‘New Basics’ is Emerging*, and Proposition 5, that *Technology Will Become Central to All Learning*.

How Does the Shift in the New Economy Impact on Teaching and Learning?

In the new economy, learning is characterised as flexible and as the adhesive that holds progress and success together. The fact that it is lifelong and constantly in flux creates a dilemma for current educational practice and principles. The notion of ‘just-in-time learning’ is evident, as people need to capitalise on self-learning strategies to continue to proceed in the architecture of the new economy. Learning will be deinstitutionalised – bounded by no walls. The learning environment will metamorphose and be accessible in many diverse structures. Formal learning will transform to become associated with a widespread, even global, population. How knowledge is constructed – Why do we learn? How do we learn? – will become very valuable.

The new learning is less about imparting defined knowledge and skills and more about shaping a kind of person: somebody who knows what they don't know; knows how to learn what they need to know; knows how to create knowledge through problem solving; knows how to create knowledge by drawing on informational and human resources around them; knows how to make knowledge collaboratively; knows how to nurture, mentor, and teach others; and knows how to document and pass on personal knowledge. In sum, this kind of person is open to autonomous, assisted and collaborative learning (ACDE, 2001, p. 69).

New learning is not about recalling specialist content, facts or subject matter. Rather it prioritises the autonomous transfer of knowledge from one situation to another, and the person's ability to develop higher levels of communication to problem solve with others is primary to appreciating the depth of new learning and new knowledge. Empowering people for lifelong learning requires more than the traditional basics (the three Rs). It is agreed that traditional literacy is important but it is no longer the sole focus of teaching and learning in the new economy. The traditional strategies of rote learning produced compliant learners. New learning produces autonomous, self-directed and collaborative individuals who reflect on, and critique, new knowledge as it is being constructed. Thus educational policies, curriculums and teaching require revision.

Proposition 4

This proposition suggested a new knowledge framework by definition. Knowledge today is '[h]ighly-situated or very specifically linked into an area of specialist professional knowledge, or a particular technology, or a particular subcultural interest, or a particular community group' (ACDE, 2001, p. 85, italics in original). It is also rapidly changing, technologically driven and diverse. Variable learning contexts allow for diverse approaches to finding answers and interpreting knowledge. Scholarship now requires expansion to include Knowledge and Capability Sets, that is, people need to be competent in selecting and discriminating relevant and accurate knowledge use. Located and Transferred Learning is embedded in locations and contexts and becomes important in

how learning and knowledge can be relocated to new situations. The reworking and transferability of known or existing knowledge to investigate new problems in a new context is an example:

‘Disciplined Learning and Reflexive Learning: [that is,] learning is not only about ‘disciplines’ – received bodies of knowledge and fixed skill sets. It is also about self-awareness, problem solving and intercultural skills – strategies, in other words, for dealing with diverse settings and rapid change’ (ACDE, 2004, p. 85). A direct association can be made here to an aspect of Vygotsky’s ZPD about how fast a student can resolve a new problem with minimal prompts from others. Learning transference is an essential component of Vygotskian theory. Vygotsky’s theoretical framework is undoubtedly relevant to current attitudes concerning education.

The deans proceeded further to identify also the characteristics of what constitutes ‘good learners’ in the new economy. Interestingly, these characteristics were also advocated by Vygotsky in relation to the role of schooling. Aspects of Vygotsky’s theoretical framework align closely with the admissions made by the Australian Council of Deans of Education. The deans advocated eight characteristics of good learners for the new knowledge economy:

Assisted and self-directed: students move from assisted to autonomous and self-directed experiences ... Learners will be designers of their own learning experiences, in collaboration with others ...

Flexible: [students] will be equipped with problem solving skills, multiple strategies for tackling a task, and a flexible solutions–orientation to knowledge.

Collaborative: ... knowledge is acquired through social activity ... [and] collaboratively ... in organisations and communities.

Good teachers: formal educational settings ... will create people who are more educators than educated.

Good communicators: ... communication is soaked with peculiarity to its setting [context specific communication] in which the specifics of the medium are markers which indicate the location and purpose of the message, and the nature of the relationships created by the message.

Of open sensibility: ... good learners are open to diversity [and] change ... sensibilities are such that they are able to use ... differences ... to best effect, by creating synergies, by using networks and forming alliances ...

Intelligent in more than one way: being able to think in more than one way ... [for example] communicative, numerate, technical ... factual, theoretical, applied ... emotional, analytical, creative or critical.

Broadly knowledgeable: Variable interpretations of information. The transfer of this information into understanding, change, cultural boundaries and the immediate world is an integral part of broad knowledge within the good learner (ACDE, 2004, pp. 85–86).

Proposition 5

The deans' Proposition 5 advocated that 'technology will become central to all learning' (ACDE, 2004, p. 99). The proposition set out to identify the role of technology in a twenty-first-century education. The deans established that there are two ways that technology functions in a capacity to transform learning.

The first way is learning through technology: this refers to learning that often is acquired through self-taught approaches, where learners are exposed to new learning opportunities outside the classroom. Technology is the vehicle for learning, giving access to not only textbook knowledge; rather people and communities that possess many kinds of knowledge inevitably

sustain the knowledge economy. The main thrust of this is that the e-learning revolution will support the obligation and commitment to find new approaches to curriculum and the continued training of teachers. The social capital of communities will continue to develop in an online capacity, further supporting the knowledge economy.

The second way that technology functions to transform learning is through learning about technology: this is understood as more than just learning the ‘how’ of technology but as being about learning how it can best serve humanity in the processes of life in society. ‘Technology is not just a tool for learning ... It should be one of the main things that learning is about. It should be the message and the medium’ (ACDE, 2004, p. 100). The discussion alluded to the need of the new basics to include *techne*⁶ as a key area of learning. The challenge of using technology successfully was then assessed. New ways of using technology were set out and both positive and negative assessments of the current and future practices in the use of technology in education were addressed. The following table summarises the discussion and highlights the possibilities for using computers in education, as set out in Proposition 5.

Table 2: *Summary of Elements of Proposition 5*

Old Learning	New Learning	Technology Disadvantages
Chalk-and-talk works for the typical child	Caters for diversity and provides customised learning	Computer-aided instruction often crams old style content into a new environment
Textbook is limited and requires no selection on the part of the learner.	Information is unlimited	Assessment can be inflexible
Skills dependent on instruction	Skills required in navigation and discernment	Skills are ever changing
Develops a compliant learner	Develops an autonomous, active and interactive learner	E-learning can work to eliminate the teacher

⁶ *Techne* is described by the deans as one of the three possible learning areas that they advocate as constituting the future of subjects in education. Traditionally the area of *techne* included science, mathematics, and vocational and technical subjects. The other two key areas are *oeconomia* and *humanitas*.

Old Learning	New Learning	Technology Disadvantages
Rigid, synchronous learning (same page at same time)	Flexible, asynchronous learning (paced to meet student's needs)	Computer-aided learning can be individualised
Group work can be difficult to manage in the classroom	Group work easy to manage online, groups can be extended beyond the classroom, can even be global	Limited access can impede progress for some participants
Learning is restricted to the classroom	Learning can happen anytime	Learning systems are designed by computer engineers not educators

It is accepted that technology will be the leading force in future education but access and equity issues are the biggest limitations on its use. These highlighted limitations point to the notion of the digital divide that is now in its second generation and is affected by telecommunications, affordability and income, online skills, age, race, sex and education. The digital divide will influence educational policy makers and the uptake of rapidly changing ICT. Pippa Norris (2001) identifies three aspects of second-generation digital divides. The first, is a global issue represented by the gap between developed and Third World nations. The second aspect, internalises the divide within a population by how its internal and social inequalities are delivered. The third aspect is a democratic divide, where citizens operate at the level they can within the technology available to them in a particular society. The deans argued that schooling will become responsible for lessening the digital divide by providing computers to students for use at school and at home. For the knowledge nation to be successful, '[it] must be inclusive and provide sufficient access to computers and the Internet for their students' (ACDE, 2004, p. 106). This has recently been seen in Australia with the policy commitment of the *Digital Education Revolution (DER) 2008*. In the DER strategic plan it was highlighted that while students have had increased "access to computers and digital resources...only a minority are reaping the full benefits of the information technology revolution"(DER Strategic Plan, 2008, p.3). Laptops were rolled out in schools in August 2009. The

Australian Government spent \$386 million ⁷ of an allocated \$1.2 billion towards meeting the ongoing needs over 5 years of technological tools for learning in the twenty-first century. The aim of the program 'is to put in place sustainable and meaningful changes to teaching and learning practices in Australian schools that ensure students are prepared for further education and training, living and working in a digital world' (Prime Minister Julia Gillard, media release, October 2009). To achieve this, all students from Years 9 to 12 will have access to wireless laptops by 2012 in all public schools. This program also offers teacher professional development through the *Information and Communications Technologies Workshop Program* and a help and support budget for each school that is involved in the program. To further support this program, a review of online curriculum resources has taken place with the overhaul of the Learning Federation website. This illustration indicates that there is a high cost to the new economy and in lessening the digital divide, particularly the new demands of teaching and learning, which are rapidly changing in Australian schooling.

Social Capital and the Rise of Technology

This rise of technology will continue to shape the existing social capital of Australia and the world. It will become an important commodity within the new economy. Social capital has been researched and defined by theorists such as Pierre Bourdieu (1983), James Coleman (1988), and Robert Putnam (1995). These theorists define social capital as a connection among individuals that creates durable networks and relationships that function within a social structure. These networks are apparent only when there is trust and the norms of reciprocity are evident within groups or communities. To be part of this social capital, civil participants must interact and contribute to a community of people committed to, shared values. This can also be exclusive or isolating for some members of society who do not have the ability to join the community.

⁷ As posted on the ABC news website, 26 August 2009.

Kenneth Pigg and Laura Crank (2004) investigated the possibility of building community social capital through technology. Their discussion defined the multiple aspects of social capital through citing works and definitions by Coleman (1990), Portes (1998), Putnam (1993), Flora (1998), Wall, Ferazzi, and Schryer (1998), Onyx and Bullen (2000), Woolcock and Deepa (2001), Castle (2002), and Farrell and Knight (2003). Pigg and Crank established the five components of social capital to be networks, resource(s) for action, reciprocity transactions, bounded solidarity and enforceable trust. Their paper contextualised 'the importance of community as both a setting and an outcome of social action as constructed in cyberspace' (Pigg & Crank, 2004, p. 59). They investigated and differentiated the notions of communication and information in relation to the opportunity to increase social capital through the five components. Communication was defined as a multifaceted function that engages interactive multimedia and is available in synchronous and asynchronous environments. Communication provides for the increase of social capital because of its transfer and relationship-building capacities offered through internet participation. Networking with people locally or globally through online discussion and email were, given as examples. Information was represented as being less conducive to supporting social capital; however, Pigg and Crank referred to information in terms of the 'active' sharing of information or the 'passive' searching for information. The main example that was utilised was the creation of user profile databases, which have the potential to support the building of social capital. A contemporary example to consider here is the rapid participation in, and popularity of, Facebook.

Pigg and Crank (2004) presented examples from many theorists who have investigated the five components. They concluded that Information and Communication Technologies potentially may have:

... positive outcomes that might be experienced in building stronger communities and increasing social capital. ICT, it can be argued, can support collaboration and decentralized decision making among citizens. ICT can support learning functions that may reduce conflict

and improve the quality of decisions and actions taken (Pigg & Crank, 2004, p. 69).

This may be good news for the deans' position on technology for education and on the changing role of schooling. Learning in the twenty-first century is in a strong relationship with the development of the knowledge economy. It exists through the active use of, and social engagement with, technology at many levels.

Interestingly and possibly controversially, in the emerging Australian Curriculum, ICT has been defined in two ways. First, it has been set in the background as an interdisciplinary general capability amongst literacy, numeracy, and critical and creative thinking. While secondly, as a subject domain, it exists in the Information and Communication Technologies, and Design and Technology, Learning Area. The Australian Council for Computers in Education (ACCE, 2011) responded to this conceptual and definitional understanding of ICT in the Australian Curriculum, publishing concerns about the current position's inadequacy for four main reasons:

- (1) the curriculum articulation of ICT competence as a general capability
- (2) the [articulation of] developmental pathways of ICT as a learning area
- (3) the [articulation of the] relationship between both ICT competence and ICT as a learning area
- (4) removal of reference to ICT in the Technologies Learning Area – [it] should be Information and Communication Technologies, and Design and Technology (ACCE, 2011, p. 2).

The ACCE then provided solutions to the identified issues by establishing the learning area for ICT in two strands: (1) ICT competence and (2) Digital Technologies. In conclusion, they argued that the measure of ICT competence needed to be presented 'in two-year intervals and [with] specific content' (ACCE, 2011, p. 4). Digital technologies should be targeted in Years 8 and Year 10. Developing ICT as a key learning area were supported by the Australian Council of Deans of Education (2004), who concluded, in a discussion, that there was a need for ICT to become part of

the new basics. The solution provided here could be useful in realising the correct positioning of ICT in Australian schooling.

Online Learning: Defining the Changing Role of Schooling in Australia

The application and integration of ICT is changing the perspective of the teaching and learning relationship and the nature of Australian schooling. Governments both state and federal have responded to the need for a ‘new basics’ in contemporary education. By publishing pedagogic principles and strategies such as *Pedagogy Strategy: Learning in an Online World 2003* through the Ministerial Council for Education, Early Childhood Development and Youth Affairs (MCEECDYA), and by outlining effective ways of integration of ICT in Australian schools, the pedagogic strategy has recognised that teaching technology in context and ICT learner capabilities are ‘essential for [successful] participation in today’s society and economy’ (Pedagogy Strategy, MCEETYA, 2003, p. 3). The publication outlined the need for ICT principles and pedagogies to be ‘learner focused’, to provide ‘educational soundness’ and ‘teacher professional development’, and to demonstrate ‘diversity, alignment’ and ‘collaboration’ when ICT is integrated effectively. The guiding application of these principles came in the following ways – by:

- creating new learning environments
 - making teaching and learning more effective and efficient
 - extending the depth and nature of learning
 - enhancing communication and collaboration
 - creating new education communities
- (Pedagogy Strategy, MCEETYA, 2003, pp. 8–9)

The terms ‘online’ and ‘blended learning’ are positioned as a way to realise the outlined strategic pedagogies and principles. ‘Blended learning environments allow students to take part in both synchronous and asynchronous learning, overcoming barriers of communication, time and distance’ (Pedagogy Strategy, MCEETYA, 2003, p. 8). A more recent publication from MCEETYA

ICT taskforce, *Digital education – making change happen* (2008) builds on the original principles through the development of a framework with 10 descriptors for identifying developing, accomplished and leading schools in digital education. The descriptors are used to identify quality digital schooling in the 21st century. These include:

- personalising and extending learning
- enabling leadership
- supporting professional learning
- connecting learning beyond the school
- improving assessment and reporting
- developing, measuring and monitoring digital literacies
- accessing and utilising student information
- providing, accessing and managing teaching and learning resources
- automating business processes
- providing reliable infrastructure

(Digital education - making change happen MCEETYA ICT Taskforce, 2008, p.4)

The framework offers schools a starting point to evaluate their context and also assist in establishing a long-term strategic plan by using the 10 elements to guide and foster leadership in a digital education. Blended delivery is a term used in the document in relation to element three: supporting professional learning. This is where staff, take on professional development and use face-to-face, online and blended approaches to develop ICT skills. While element 4: connecting learning beyond the school provides for the engagement of students with broader online community connections.

In March 2012 the *Draft Shape of the Australian Curriculum Technologies* paper was published. This was in response to the *Melbourne Declaration on Educational Goals for Young Australians* that was established in 2008. Neither of these documents mention, blended approaches to teaching and learning. The term online is presented in the Technologies curriculum on three occasions. The first is to responders to the draft paper (pg.6), the second under managing projects, where students are to consider ethical considerations while working online (pg.13) and the third in Yr 5-6 Digital

technologies content.

After an in-depth investigation into Australian state and territorial Departments of Education websites to find examples of how online learning was being delivered and if blended learning models and approaches were being promoted, it was found that most ICT-funded projects and programs were focused on the delivery of networks, wireless Internet, computers, smart boards, Ipads, increased bandwidth, and video conferencing; the recycling of computers, increase in access ratios; the provision of email; and the development of digital content. For examples of funded projects and initiatives, see *Smart Schools: Smart Students 2006*; *Connected Classrooms Program 2007*; *Digital Learning Statement 2010*; *Ipads for Learning Trial 2011*; and the *Smart Classroom Strategy 2011*.

Examples in state government initiatives which aim to deliver some of the Pedagogic Strategy as defined by MCEECDYA can be found in distance education and schooling. The Tasmanian Department of Education project, which researches, designs and delivers online, is *E-Magine the Centre of Excellence in Online Learning (2001–2004)* (cf. Chalmers [2002a]). This project's primary purpose was to 'initiate and support excellence and innovation in teaching and learning through the use of online technologies' (Chalmers & Krawec-Wheaton, 2003). The project drew its inspiration from the work of Stephen Heppell and the *Not School Project* (1998) from the United Kingdom in supporting and training teachers in flexible online learning and delivery and the formulation of learning networks through their online campus. The Tasmanian project is significant as it tackles the concept of flexible learning through technology with online experiences across multiple schools. The project has since been reallocated to a new School Education Division and Distance Education Tasmania, where the online campus continues to deliver to students and teachers. The existence of this project demonstrates the need for more than just ICT integration at a school or curriculum level. Rather, a more flexibly planned, supported and researched approach to ICT in schools is required to include state-funded and federally funded projects.

Other examples where online and blended learning are formally appearing as a delivery method in Australian schools are in the Sydney Distance Education High School and the Department of Education and Training Rural and Distance Education New South Wales, the Schools for Isolated and Distance Education Western Australia, the Open Education Centre Northern Territory and the Open Access College South Australia. These institutions are using MOODLE to deliver and manage their online courses and interactions with students and teachers. The use of MOODLE is not exclusive to these schools, as many independent and public schools have adopted the MOODLE site as an online component to support their teaching, learning and curriculum development. There are currently 1463 Australian site users,⁸ many of which are schools. The changing relationship between technology and teacher and student learning is facilitated in the learning community of the Sydney Centre for Innovation and Learning, based in the Northern Beaches Christian School. The school's Principal, Stephen Harris (2010), has applied a whole-school approach in encouraging his school community to make the pedagogical shifts necessary to sustain, nurture and develop ICT practices by students and teachers in their everyday lives. MOODLE is used as a vehicle; however, it is part of a broader conception of how teaching and learning should look in the twenty-first century. A critical change in the management structure of the school, the professional learning of staff, and the physical, virtual and pedagogical workspaces, have all signalled a move away from traditional concepts of the role of education. This example demonstrates an integrated approach to the pedagogical shifts required to define the changing role of schooling in contemporary Australia.

⁸ Statistic from moodle.org, 24 April 2011.

Social Organisation of Instruction: Online Environment, Theory, Interaction, Blended Approaches

In the technological teaching and learning relationship, instruction can occur via either asynchronous or synchronous communication. Online learning environments such as MOODLE become the catalysts for this type of teaching, learning and instruction. The online theory of Gilly Salmon and the definitional understandings of blended approaches to instruction will also be discussed in this section.

MOODLE stands for 'Modular Object Orientated Dynamic Learning Environment'. As a course management system (CMS), MOODLE is a software package that provides a virtual or online learning environment and a flexible course structure that, in turn, offers 'opportunities for rich interaction' (Zsolt & Istvan, 2008, p. 3). This environment exists on internet and can be accessed from any point connected to the worldwide web. Other CMS software such as WebCT and Blackboard are also available. (These can also be referred to as a Virtual Learning Environment [VLE] – Zsolt & Istvan, 2008, p. 5). The well-established systems are known as proprietary software, meaning that there is a cost to the user for licensing and usage. Open source software does not incur major costs to the user and is available to small or large organisations. MOODLE is an evolving platform that users can help construct. Open source software allows access to coding, giving the user a greater ability to customise where necessary. The software offers a range of communication opportunities suitable for both synchronous (chat) and asynchronous (forum) modes. It also offers a journal mode, where participants can make reflective entries. Other aspects of the course software include assignment, quiz, resource, glossary, lesson and choice modules, allowing for great flexibility in course or unit design. Further plug-ins, are constantly being developed and shared by users through the moodle.org site. The MOODLE community has over

54,147 registered users in 212 countries.⁹ As open source software, it is competitive and user-friendly in design.

The philosophical position advocated by its creator, Martin Dougiamas, is social constructionist by design, a feature that this study is most concerned with. Dougiamas defined MOODLE's philosophy as:

The design and development of Moodle is guided by a particular philosophy of learning, a way of thinking that you may see referred to in shorthand as a 'social constructionist pedagogy'.¹⁰

This pedagogical statement promotes online learning towards a collaborative community of practice (Lave and Wenger, 1991). The roles of the teacher and the student are not necessarily traditional in this community. Current educational literature in higher education where studies have been undertaken using MOODLE include Dougiamas and Taylor (2002; 2003), Kennedy (2005), and Benito, Camara, Losada, Arranz, and Seidel (2007); and, in the secondary school setting, Carvalho (2007), Loughland (2008), Murphy and Lebars (2008), and Ng (2010). One of particular note, as it was situated in the secondary school setting and is consistent with the current research, is Wan Ng's 'Effective e-Pedagogy for Virtual Science Learning with High Ability Secondary School Students' (2010). Ng's study utilised the MOODLE environment to allow gifted science students who had attended the Sun and Science Camp to access each other within small groups across Australia, Malaysia and the United Kingdom. The aim of the study was to apply an online learning model designed by Ng and Nicholas (2007) in this context and to develop two forms of pedagogical delivery. One form was 'open structure' and the second was 'staged structure where learning is guided and progressive' (Ng, 2010, p. 50). The synchronous and asynchronous dialogue interactions of the students were analysed in frequency and content; other data studied included

⁹ Statistic from moodle.org, 24 April 2011.

¹⁰ Martin Dougiamas, *Moodle documentation: Philosophy*; see <http://moodle.org/doc/>.

online chat interviews; and post-learning surveys canvassed student perceptions. The cognitive theories of Bruner (1966) and Papert (1991), and Vygotsky's (1978) sociocultural theories, were referred to as the underpinning theoretical perspectives. Through this line of investigation no MOODLE online studies were found in secondary art education.

Online Learning Theories

With the growth of internet and computer technology, online learning theories and instructional models and frameworks have emerged rapidly (Ally, 2004; Anderson, 2004; Jolliffe, Ritter, & Stevens, 2001; Jonassen, Peck, & Wilson, 1999; Salmon, 2002). These writings are but a few from a growing body of research on the subject. There is a clear focus by theorists in this area on developing clear design and instruction materials and activities relevant for the web and its associated learning platforms. Ensuring learner success is of paramount importance as there is an ongoing debate regarding whether the design of online instruction or the delivery of technology improve learning outcomes (Clark, 2001, and Kozma, 2001, in Ally, 2004).

Online learning was defined for the current study according to Muhamed Ally's paper, 'Foundations of Educational Theory for Online Learning' (2004), as:

the use of the internet to access learning materials, to interact with content, instructor, [practitioners] and other learners; and to obtain support during the learning process, in order to acquire knowledge, to construct personal meaning, and to grow from the learning experience (Ally, 2004, p. 5).

The word 'practitioners' is added to this definition to include experts in the field (that is, artists). The real-world, meaningful and authentic interactions that are significant in this type of interaction are reflected in the program design of this study. Ally also considered the advantages of online learning, especially the flexibility, location and type of interactive communication that it offers and the situated nature of contextualised learning (Ally, 2004, p. 5). Ally advocated a point of further

significance in the use of appropriate learning and instructional strategies when developing online materials.

Learning strategies should be selected to motivate learners, facilitate deep processing, building the whole person, cater for individual differences, promote meaningful learning, encourage interaction, provide feedback, facilitate contextual learning and provide support during the process (Ally, 2004, p. 6).

On the basis of this understanding of online learning, the Five-Stage Model by Gilly Salmon (2002) was selected for investigation and implementation as the online learning model for the current study. However, as the study used a blended approach, the model was used as a design structure for instructional aspects of the online components of the program activities, as set out in the research methodology.

The Salmon model is widely cited amongst theorists and researchers and has recently been used in developing higher and distance education course design (Conole, Oliver, Falconer, Littlejohn, & Harvey, 2007; Goldsmith & Strachan, 2007; Jones & Peachey, 2005; Stenalt & Jorgensen, 2007; Wilson & Mackness, 2006) and online research methodology (McPherson & Nunes, 2003; Fox & Trinidad, 2006; Ryba et al. 2002). Gunn (2001) and Manghani (no date) have offered a review and critique of the model.

The model comprises five stages, illustrated as steps, in which learners are led by e-moderators (online tutors) through carefully designed e-tivities (online activities) and work asynchronously. Salmon has stressed that the importance of the content in the e-tivities is crucial to the success of learners' online interaction. Salmon defined e-tivities as interactive, motivating, engaging, purposeful and taking place over time (Salmon, 2002, p. 1). E-tivities help develop learner skills in both collaboration and the use of software. The Five-Stage Model is designed like a 'social scaffold' (Salmon, 2000, p. 32) to ensure that learners progress through the online learning

process. Figure 4, represents Salmon's diagram of the learning stages and interactivity of online learning. A brief explanation follows.

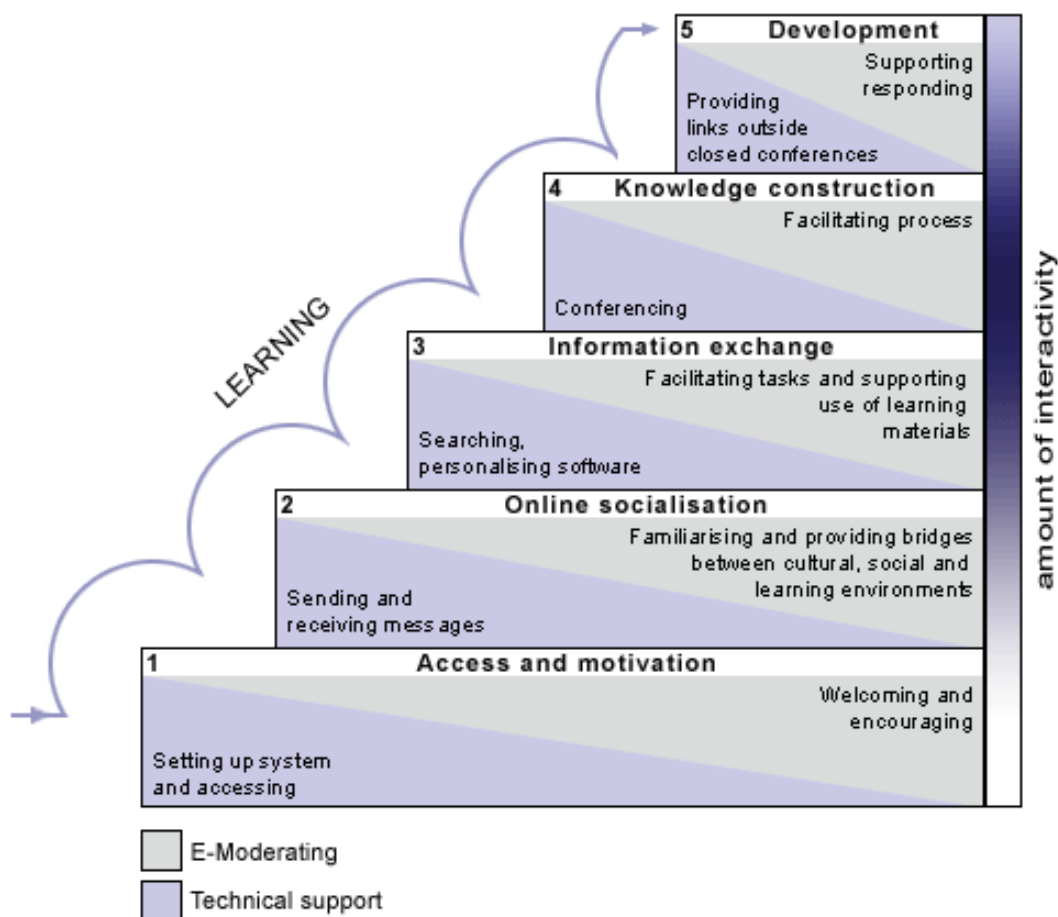


Figure 4: Gilly Salmon's Five-Stage Model as a social scaffold. Image from: 'E-tivities: The Key to Active Online Learning'.

Stage 1: Access and Motivation: offers learners a starting point in getting to know in this instance the MOODLE discussion platform and in becoming familiar with the online environment and group. Motivation is the key principle and often the most difficult part in accomplishing interaction. Salmon advocated clear explanation of the aims and purposes of the activities and of the roles of participants. Motivation should be planned and offer challenges for participants.

Stage 2: Online Socialisation: will occur if there is support by the e-moderator. The online environment is not able to ensure that this occurs of its own accord. This is the beginning of the development of a culture where learners feel comfortable and are able to voice their opinions.

Stage 3: Information Exchange: is where interactivity starts to increase and learners are comfortable, with the environment and topic under investigation. The focus shifts to ‘interaction with course content and interaction with people’ (Salmon, 2000, p. 38). Stage 3 offers learners the opportunity to work cooperatively.

Stage 4: Knowledge Construction: should give rise to interaction and collaborative work. As the terminology suggests, this is the stage where learners and others interact through active, critical, creative or practical ways of thinking (Salmon, 2002, p. 29). Salmon cited communal constructivism as the underpinning principle in this stage where emphasis on ‘real situations and experiences’ (Wenger, McDermott, & Snyder, 2002, in Salmon, 2000, p. 41) fosters the growth of ideas and ways of constructing knowledge.

Stage 5: Development: creates opportunities for learners to be critical and self-reflecting. Learners use past experiences to develop their own learning and understanding, contextualising what they have come to understand.

For any of these stages to be reached there must be a certain level of interaction or ‘interactivity’ (Anderson, 2004; Salmon, 2002) between the participants in the online context.

Online Interaction

At this point in the literature review it important to identify and discuss the types of interaction that occur in online environments and to review a selection of relevant recent studies that exemplify online participation that may offer some educational value.

Interaction is difficult to define in educational terms (Anderson, 2004); however, interactivity holds a firm relationship with social development theory (Vygotsky, 1978) and with the learning process that takes place within a community of practice (Lave & Wenger, 1991). In the online environment, interaction can occur in various ways: computer/video/audio conferencing, and text-based exchanges that include asynchronous and synchronous communication. Michael Moore

(1989) identified the following types of interactive relationships: student-student, teacher-student, student-content, these relationships, were further expanded by Anderson and Garrison (1998), to include teacher-teacher, teacher-content and content-content. Interaction in the current study was expanded one step further to include the art practitioner or 'expert in the field' (Lave & Wenger, 1991). So interaction can be understood as being student-student, student-teacher, student-practitioner or teacher-practitioner. Content is inextricably linked to all these relationships.

The study of interaction in online learning is being, led by tertiary-level educational institutions. Examples include education courses in teacher training programs and broader courses in universities (Fox & Trinidad, 2006; Hough, Smithey, & Evertson, 2004; Sing & Khine, 2006). The study of interaction is often referred to in the literature as computer-mediated communication (CMC). This is an area of research that, while growing rapidly, is yet to develop a theoretical position by demonstrating empirical evidence (Jeong, 2003) within online communication studies. Coding systems are emergent in nature and often specific to, or designed for, unique research tasks or questions.

CMC studies of primary and secondary school applications are limited. From my investigation there are no CMC research papers in Visual Arts Education at a secondary level. There are examples in secondary science (Baker, de Vries, Lund, & Quignard, 2001), languages, (Jahnke, 2010; Kern, 1996; Kimber & Wyatt-Smith, 2010; Warschauer, Turbee, & Roberts, 1996), ICT (Cheong & Cheung, 2008), primary education (Lipponen, 2000; Lipponen, Rahikainen, Lallimo, & Hakkarainen, 2003; van der Meijden & Veenman, 2005) and online K–12 curriculum development (Doering, 2007). The educational value of these inquiries into interaction demonstrates a range of outcomes. However, the importance of research in school settings must be realised for future engagement with CMC for primary and secondary students.

Definition of a Blended Learning Approach to Instruction

Educators have traditionally utilised a blended approach to instruction to motivate student interaction and give students learning opportunities to match their learning styles. A blended approach to instruction can be defined as ‘the integration of different types of resources and activities within a range of learning environments where learners can interact and build ideas’ (Littlejohn & Pegler, 2007, p. 1). A more contemporary use of the term ‘blended learning’ is directly associated with e-learning or learning online. There are many ways in which the terms are defined in the current literature. Littlejohn and Pegler (2007) defined this association as ‘the possibility of interacting in real time (synchronously) in conjunction with opportunities to collaborate over a period of time (asynchronously) ... [allowing] for different forms of dialogue and new types of learning’ (Littlejohn & Pegler, 2007, p. 3). Charles Graham and others defined blended learning as ‘combin[ing] online and face-to-face instruction’ (Reay, 2001; Rooney, 2003; Sands, 2002; Ward & LaBlanch, 2003; Young, 2002, in Graham, 2005). Graham advocated four levels of blending in current educational circumstances and practices to include:

- Activity-Level Blending: contains both face-to-face (FTF) and computer-mediated (CM) activities
- Course-Level Blending: FTF and CM activities that overlap in time or follow one another in sequence.
- Program-Level Blending: participants choose a mix of FTF and CM activities that may be offered at a distance.
- Institutional-Level Blending: an example would be FTF activities at the beginning and end of a course, while online work is completed during the intervening period.

He further established three categories of blends for blended learning systems: (1) enabling, (2) enhancing and (3) transforming. The last-mentioned is found in software applications and learning management systems, and is underpinned by the use of technology and the application of

constructivist theory, where ‘learners [move] from [the] model of learners as receivers of information to a model where learners actively construct knowledge through dynamic interactions’ (Graham, 2005, p. 13). Interestingly, Graham concluded, through his review of corporate and higher education research examples, that transformation is harder to achieve in education due to ‘environments, constraints such as class size, location, and availability of technology [, which] can provide a formidable barrier to making transformative changes’ (Graham, 2005, p. 14). The current study is aligned to the approach of activity-level blending as detailed by Graham. It offered students activities that were designed to work on a face-to-face level as well as in the online context.

Another useful definition of blended learning came from Margaret Driscoll (2002) as she set out four concepts to define different understandings of how blended learning is interpreted and defined in current practice:

- (1) the combination or mixing of modes of web-based technology (for example, live virtual classroom; self-paced instruction; collaborative learning; streaming video, audio, and text) to accomplish an educational goal;
- (2) the combination of various pedagogical approaches (for example, constructivism, behaviourism, cognitivism) to provide an optimal learning outcome with or without instructional technology;
- (3) the combination of any form of instructional technology (for example, videotape, CD-ROM, web-based training, film) with face-to-face instructor-led training;
- (4) the combination or mixing of instructional technology with actual job tasks in order to create a harmonious effect of learning and working. (Driscoll, 2002, p. 54)

Driscoll identified the multiple characteristics and practices that blended learning can offer teachers and instructional designers. It is important to grasp that technological pedagogy in the form of instructional modes of delivery is increasingly becoming part of teacher-learner experiences.

The term ‘hybrid’ is also associated with courses that offer a mixed mode or blended approach to teaching and learning (Brown, 2001; Young, 2002, in Montera-Gutierrez, 2005), where

students may learn at a distance or engage in self-paced (Valiathan, 2002, in Mortera-Gutierrez, 2005) course work.

Another definition consistent with the aims of the current study has been offered by Professor Kerri-Lee Krause, from Griffith University in Queensland.

Blended learning is realised in teaching and learning environments where there is an effective integration of different modes of delivery, models of teaching and styles of learning as a result of adopting a strategic and systematic approach to the use of technology combined with the best features of face to face interaction . . . The defining characteristic of blended learning approaches is that technology will be used to enrich the quality of the student learning experience through interactive learning activities beyond those attainable through face to face classroom interactions (Krause, 2008, p. 2).

Blended learning is therefore an integration of a variety of best-practice face-to-face instructional methods and complementary asynchronous online learning experiences. This relationship is strengthened through the application of technology as the vehicle to engage in the ‘continuous learning process’ (Singh, 2003). The approach offers a learning environment that is flexible, self-paced, timely and differentiated. Student learning is complemented by unique interactions with activities, resources, peers, teachers and practitioners. Knowledge is not the focus; rather the quality of interactions in the teaching and learning experience becomes the goal. This is where a blended approach to instruction can be personally transformative.

Blended learning research, as noted previously, is prevalent in tertiary education as it has in recent years become a common mode of practice in course and subject construction in order to enhance group interaction and facilitate asynchronous learning opportunities for an increasingly enlarged student cohort. Ana-Maria Bliuc, Peter Goodyear and Robert Ellis (2007) provided a comprehensive review of recent research and studies undertaken in this area.

In contrast, secondary education research is limited to a few papers. Examples include Jean Macnish and Sue Trinidad’s investigation (2002) of a Vocational Education and Training course in

retail in Western Australian schools; and K McKenna's (2002) 'Thinking Multimedia Program: A Real World Experience for Students', which used a range of technology including discussion boards. Julie Robinson, Carloyn Thistlethwaite and Tsae Wong (2005), directors of teaching and learning at John Paul College, Queensland, re-visioned their school's pedagogy to include the potential for blended learning. In the current literature search, there were no examples grounded in Visual Arts education that demonstrated a blending of learning. Due to the lack of research in the secondary school sector it is difficult to draw conclusions about how blended learning is defined and applied. In higher education the blending of learning is moving more quickly, new publications take up key ideas to include mobile devices, connectivity, openness, collective intelligence and virtual worlds (Salmon 2012), *frameworks and practices* (Garrison & Vaughan 2008). Innovations in blended learning area are largely in higher education. The parameters of blended learning for this study were determined by the context of a secondary high school setting. More research is required to establish how a blended learning approach is unfolding in twenty-first century secondary education. The contemporary absence of investigations into blended learning and the Visual Arts has driven my interest in the area. This impetus has been further underpinned by my classroom experience.

Socially Mediated Communication in Secondary Visual Arts Education

It is now helpful to highlight the current position of secondary Visual Arts education with respect to socially mediated communication. As this is a context that has not been written about explicitly in the field of Visual Arts education, 'mediation' has been the common research term used to explore socially mediated communication. However, it became evident from researching for the current study that authors have generally presented a broader application of technology in Visual Arts education. Some examples include artmaking curriculum in both primary and secondary settings (Crowe, 1988; Johnson, 1997; Matthews, 1997; McCulloch, 1984; Pitt, Updike, & Guthrie,

2002), collaborative dimensions of learning (Hamm & Adams 1992), art teachers' perceptions about technology (D'Angelo, 1988) and art technology and communication in museum settings (Pierroux, 1998, 2003a&b, 2011). Mediation in Visual Arts education has often been presented in art educational research and theory as investigating the 'mediated image' either in the making and creating of artworks (Chia & Duthie, 1993; Freedman, 1989; Greh, 1986; Madeja, 1993; Thompson, 2003), in collaboration with others to create virtual art objects in online environments (Roland, 2003; van der Meijden, Janssen & Ligorio, 2002), or in the interpretation and appreciation of artworks (Koroscik, Osman, & DeSouza, 1988; Pierroux, 2003a).

In the process of researching socially mediated communication for this literature review, it was difficult to locate a research thread within art education that acknowledged mediation that is communicated socially within an ICT secondary setting. However, one paper that investigated the computer-mediated nature of art education was Tony Scott's article, 'Computer Mediated Art Education: Extending the Paradigm of Computer Art' (1992). While this article was written some time ago, its historical significance is important as there are points made that are still relevant to the area of secondary school Visual Arts education and its connection to technology and computer mediated communication. This lack of available research papers further highlights the slow advancement in the research on technology in the subject of Visual Arts in a secondary context.

Scott has a dual role as an art educator and a computer educator, and his experience in these roles provided him with the impetus to bring the two subject areas together. Scott advocated a dual approach to computer-mediated art education. The first approach is for art educators 'to address the ways in which computer use affects the arts' and the second is for art educators to understand 'the catalytic nature [of computers,] resulting in the reconfiguration of the teaching process itself' (Scott, 1992, p. 27). He stated that the second point in computing education is well researched and that he would focus on the first: 'the mediation of artistic dimensions of society by computer and the art

educator's responsibility to address that mediation' (Scott, 1992, p. 27). Scott went onto describe the relationship between art and computers:

as a medium for visualisation and creativity ... for aesthetic or pedagogical or social reasons ... the intersection of computing and the visual arts is, indeed, one of the 'ways of knowing' about the world ... this way of looking at the world is often labelled as *scientific visualisation* (Scott, 1992, p. 29, italics in original).

He also identified that art education at the time has emerged to be understood from a discipline-based orientation with multiple perspectives (Sullivan, 1993). But he also conceded that the application of computers in this area has been largely directionless. Scott articulated that this was the case because 'computing facilities in the arts are mostly used for artmaking ... we generally see scientific visualisation processes interpreted only from a perspective of artmaking' (Scott, 1992). Scott made it clear that computers play a role in the development of students' ways of knowing in all aspects of art educational studies. 'The use of computers to promote historical understanding, critical faculties, contextual commentary, even philosophical debate, certainly provides opportunities for new paradigms of teaching and learning' (Scott, 1992, p. 29). This article was written twenty years ago and it seems from the lack of literature that the shift to a new paradigm is yet to happen for computer mediation in Visual Arts at a secondary level.

To bring this discussion into more recent literature, a broader discussion of ICT and art and design education¹¹ is needed. Natascha Radclyffe-Thomas in her article *White Heat or Blue Screen? Digital Technology* (2008), reviews the adoption of ICT in art and design education. The article pursues to examine the pedagogical debate with ICT and its use in art and design education, offering an answer to why there is not much research in CMC in Visual Arts at a secondary level. One of her first main claims is that "...no consensus exists within art and design education as to the

¹¹ Art and Design education is understood here at a higher education level, as it is still a separate subject in current NSW schools. Design in the forth coming Australian National Curriculum is aligned with Technology but not vice versa. This in itself may lead to partly answering the debate to where the ICT focus of Visual Arts education in secondary curriculum is situated at the present time.

role of ICT or even its validity in the arts”. Her second main claim is that the definition of ICT as tool or subject is yet to be embraced by art and design educators. Radclyffe-Thomas draws on research to substantiate her claim “Recent international research into technology use in art and design education (Wood, 2004b) reveals that although a minority of teachers have embraced digital art as a subject encouraging full use of its potential, for most teachers technology is conceived of and used as a tool, an addition to their repertoire...” This correlates with Scott’s perspective that artmaking is still the main deployment of technology use. However her discussion on this matter is elaborated and constitutes that there is still this belief but a growing number of educators are “using computers as a research, an artmaking and a communication tool.” On the point of CMC she expands her discussion to highlight key benefits and examples of good practice in higher art and design education, where institutions have linked with other geographically distant institutions to produce a virtual studio environment. The pedagogical significance of this being that students could see the progress of work and post comments and have interactions with others while in the creative process. Other examples cite video conferencing as a method where students and teachers can connect to practitioners in their studios, to museums and galleries.

With all this examined, Radclyffe-Thomas identified that funding, teacher adoption and use and setup of ICT, the homeostatic nature of institutions, and even timetable constraints are factors that can burden the creative uptake of ICT in art and design education. The current study has started to address the possibilities for giving students the opportunity to engage with practitioners, have discussions, and produce documentation in a blended approach to learning about art.

Chapter Summary

This literature review took its direction from the three-fold research framework of the current study. First, it broadly positioned the changes in Australian schooling through policy development and its implications for contemporary ICT practices. With government economic demands, the professional development of teachers and the acquisition of computer hardware in

technology, seems to be where funded educational projects of the last decade have focused on achieving goals in ICT in contemporary Australian schooling. It is clear that there is some consensus amongst policymakers that technology and knowledge construction should be at the centre of how we should teach and learn, although there is still disagreement and debate whether ICT should be a stand-alone subject or integrated within all learning areas. This debate is currently unfolding as Australian education enters a new era and moves to a national curriculum. The Australian Council for Computers in Education has argued that the current conceptualisation is inadequate.

Secondly, the concepts of online learning and blended learning are still finding their place in contemporary Australian education, with examples appearing in distance education programs. The inception and use of MOODLE has provided for this uptake in the secondary school setting. This is due to its philosophical standing, low-cost accessibility, and user development options, which allow for unique authorship of MOODLE applications and specific program design according to need. What can be drawn from the examples discussed here is critical in adopting needed change in contemporary Australian schooling. An integrated approach is required to enact pedagogical shifts in teaching and learning through technology. Even the physical aspects of the workspaces of students and teachers, and the interactions that are allowed to take place and are given appropriate time to develop, are critical to the challenge of moving education forward. For the few researchers working in the secondary school setting, they have begun the important shift in teaching and learning in the twenty-first century. These are significant projects as they begin the dialogue required to make such change take place in all subject areas.

Thirdly, from the absence of research in the critical and historical areas of technological uses in art education, it is clear that researchers need to investigate a range of issues in the subject area. An integrated model in the practices of learning about art through technology is needed. A blended approach to teaching and learning in secondary settings could warrant this change.

However, the importance of mediation as the vehicle for social transformation is yet to be taken up by art educators in contemporary environments such as blended or online learning. This said, the nature of the subject of the Visual Arts lends itself well to this kind of activity, as it provides opportunities for meaning making, authentic practice, critical reflection and pluralist perspectives (Sullivan, 1993) in multiple interpretations of art knowledge. A contemporary art education needs to provide all these opportunities, and technology should be able to employ social mediation to achieve this.

CHAPTER 3 – THE RESEARCH DESIGN AND METHODOLOGY

Introduction

One of the purposes of this study was to provide the school Redlands with the formative evaluation of a unit of Higher School Certificate work that eventually took place in 2008 using the MOODLE online environment. The formative evaluation took into consideration the interaction of staff, students and art practitioners with their engagement in, and completion of, tasks online. The study focus and design was located in the depth of dialogue created by the three types of participants. The units of analysis took place in groups, where students, staff and art practitioners worked online to produce written products. The sampling strategy emerged within the framework of a single case study. A single, preselected group was used as the major source of in-depth investigation, then a subgroup was selected for dialogue and product outcome investigation. Data were collected mainly by a qualitative approach, although some quantitative data were collected and analysed: part of the research structure, and the research questions, demanded this complementary method of investigation.

This complementary approach to gathering research utilised the Triple P Framework (Ryba et al., 2002). This framework has specific qualitative and quantitative dimensions. The controls that were exercised in the case study were supported by naturalistic case study inquiry. Boundaries were set by the particular secondary school setting, the MOODLE online environment, the New South

Wales Board of Studies (NSW BOS), the Higher Schools Certificate (HSC) curriculum, and also by an emergent case study design. The analytical method was descriptive and interpretative, following an inductive analysis of the emergent data found in the participants' dialogue and online products. Patterns, themes and categories were established after the data were collated. Both content and statistical analysis took place but results were not generalised due to the smallness of the sample.

The case study found its confidence in validity by careful design. Triangulation of multiple data and methodology sources was the main strategy of investigation using three research questions and three goals of inquiry. The study occurred within a fixed period of time and was structured into three analytical phases. The logistics and limitations of the case study entailed the individual differences amongst participants, including their variable access to internet, and allocation of time and commitment to the case study. Ethical considerations were addressed through informed consent and exclusion of personal details from content that was evaluated for the case study. The cost of the case study was minimal to participants and was mostly administrative.

The Overall Objective of the Study

The study sought to answer the question: What effect does the blended learning environment have on student perceptions, interactions and work samples produced?

The Research Questions

RQ1: Social Context for Learning

- (a) What are initial student perceptions of online learning, interaction, group work and the practice of art writing?
- (b) How do students perceive their experiences in using technology for group work, online learning and the practices of art writing?
- (c) Do student perceptions change as they engage in the unit of work?

RQ2: Socially Mediated Communication

- (a) What kind of communication in an asynchronous online learning environment promotes meaningful understanding in a Visual Arts Education context?
- (b) How are Visual Arts Syllabus processes enacted within online learning and specific Visual Arts tasks?

RQ3: Social Context for Instruction

What kind and quality of student products are developed through the online learning environment?

Site Selection

The site selection for this study was determined by the place of employment of the researcher as a research fellowship was offered within the school setting. The researcher established a proposal outlining the use of MOODLE as a platform for blended learning within the Visual Arts Department. An innovative program was developed and accepted by the school as an important formative research project with the potential to shape the future of ICT use in the school's curriculum. The use of this site meant easy access and advantages for the researcher, such as knowing student and teacher skill levels and access to the available resources within the department and school before developing the program and research model.

Ethics

Ethical considerations in this case study were important because of the type of participants who were expected to be involved. The study used informed consent as a mechanism to ensure participants were aware of their commitment to, and involvement and possible risks in, the study. As students were under the age of eighteen, parental consent was required before the commencement of the online program. Students and parents had the choice to withdraw from the

study. The consent form outlined the selection process of the participants, the risks and confidentiality of the study, and the aims and purposes of the research. A copy of the Participant Information Statement and Consent Form is available in Appendix 1.

As part of the case study methodology, all dialogue and responses were coded. Identifying information such as names and school-, department-, or site-specific terminology were removed. This was to ensure the privacy of the participants and to minimise any bias emerging from the researcher. The discussion forums were analysed after the member checking process to ensure integrity in the analysis of the data. Student responses to the pre- and post-questionnaire were also anonymous.

The Research Participants

The participants in this study included the researcher, students and staff of the Redlands Visual Arts Department, and invited art practitioners who had participated in the Redlands Westpac Art Prize during the past ten years. The table below summarises the research participants by type.

Table 3: *Research Participants*

Participants	No.
Students	12
Teachers	2
Art Practitioners	3
Researcher	1
Total	18

The student's were enrolled in the Year 12 HSC Visual Arts Course in 2008. This blended learning program of work was constituted as one Visual Arts Case Study that the class needed to complete prior to the HSC Examination. The program ran from May through June in 2008. It was decided eventually that this Visual Arts Case Study would not be part of any major final assessment as not all students were comfortable with the MOODLE online learning environment. Students worked in three small groups determined by the researcher after careful analysis of social and group

dynamics through the Pre-Online Questionnaire. The teachers involved were current employees of the school at the time of the case study program and they offered their commitment beyond their normal teaching load to become online tutors. They received minimal training by the researcher but were already familiar with the MOODLE online platform in various ways, having had experience with it in the Visual Arts Department over about two years prior to the commencement of the program. The staff had a good understanding that they were there to encourage and support the students.

The art practitioners were invited from the list of past recipients of the Redlands Westpac Art Prize. Three art practitioners agreed to complete online work with the students, which is why there were three groups. The art practitioners were given a minimal introduction to the MOODLE online environment and program outline on the phone, as they were located geographically in the Blue Mountains, NSW; South Australia; and Tasmania. This precluded face-to-face contact during the short time of the delivery of the program. The art practitioners were in touch with the researcher by phone or email for support in negotiating the interface. The researcher gave support when and where it was needed to ensure the practitioners were able to interact successfully online with their student groups.

The researcher played several roles in the research project, including those of the class teacher, directing the face-to-face experiences; the MOODLE online administrator of groups, where interaction was consciously limited to making responses only; the 'help desk', resolving technical questions wherever possible; and participant-observer in one group.

Sample Selection

The sample selection for this study was informed by the pre-selection of the Visual Arts Program, which itself was under formative evaluation. As such evaluation does not seek to

generalise (Patton, 1990, p. 156), findings here will be utilised to improve delivery of the program within Redlands school. The sample selections were determined by the research questions.

Sample Selection for RQ1

All participating students and their responses were studied in relation to RQ1. There were twelve students who completed a Pre-Online Learning Questionnaire (Appendix 2) as a compulsory class activity. As students worked online, there were three online reflection periods during Task 3 Forum, Task 5 Forum, and Task 8 Forum (See Table 4). These mid-program reflections were designed to encourage students to discuss their online experiences but were not compulsory. As an evaluation task at the end of their online experiences, students completed an Online Feedback Questionnaire (Appendix 3). This was a compulsory activity although, on the day, three students were absent from school and did not complete the survey. The absences are noted in the results chapter. These absences seem, however, to have had little effect on answering this research question as there were sufficient responses from the other participants to establish results. Teacher responses were low in this part of the study as the questions were aimed at students only. The following table gives a summary of the Data Collection Instruments and the student and teacher response totals.

Table 4: *RQ1 Data Collection Instruments*

Data Collection Instruments	Students	Teachers
Pre-Online Questionnaire	12	0
Online Reflections Task 3	11	2
Online Reflections Task 5	8	0
Online Reflections Task 8	0	0
Online Feedback Questionnaire	9	0

Sample Selection for RQ2

To analyse the large body of dialogue created in the online discussion samples of this study effectively, it was decided to analyse only one group for RQ2. This was the ‘Smart Arts Group’

(SA), which was selected for three important reasons: (1) the group dialogue was focused on the online tasks and of a high quality, (2) the researcher was not part of group interaction, and (3) the group completed the most forums and posted a final product.

The RQ2(a) sample selection included two forums with five threaded discussions in the SA's communication, namely, Task 2: Forum: Who Am I?, and Task 4a: Forum: Conceptual Framework Discussion: (1) Artist, (2) Artwork, (3) Audience, (4) World (four discussion threads).

The RQ2(b) sample selection emerged from a review of data in RQ2(a) Table 16. Data were again drawn from Task 4a: Forum: Conceptual Framework Discussion. The same discussion threads were used but they were investigated from two different points of view: (1) the enactment of the Visual Arts Curriculum, and (2) the giving of advice to the students by the artist.

Sample Selection for RQ3

The RQ3 sample selection was the last discussion thread from the SA group, Task 4a: Conceptual Framework Discussion. This discussion was chosen because it demonstrated how participants created the artist summary while using the Conceptual Framework scaffold document and posting it online as a product of their investigations.

Bias

As this study utilised a blended approach to learning, the researcher was also the face-to-face teacher for all the twelve students involved. This is in part why no face-to-face episodes were part of the research. Participants were not told which aspects of their online work or which group's discussion, communication and work samples would be studied. This was kept confidential until the member check process. The researcher was aware of being a participant-observer since the researcher was an online tutor for one of the groups. However, to ensure lower instances of bias, a deliberate decision was made to use a group tutored by another teacher. During this study the

researcher had to alleviate several online problems in the capacity of site administrator, so there were communications related to such problems that were imperative to resolve for the successful continuation of the project. In the dialogue that was studied there were two instances of the researcher making direct contact with one student in the studied group. This was an administrative matter to do with the upload size of documents in forums. The interaction was short and had a direct impact to the students being able to continue with the forum. It has been noted in the conclusion that a more practical approach to the management of the site is needed, for example having an IT Administrator resolve technical problems. This would ensure the researcher is not involved with any online communication.

Methods of Data Collection

As this study utilised a single case study to formatively evaluate an educational program within a particular setting, content analysis (Neuendorf, 2002; Weber, 1990) was both qualitative and quantitative. A variety of methods, including questionnaires, online reflections and forum dialogue, and a work sample were used to obtain the data needed to answer the research questions.

RQ1 Questionnaires and Student Reflections

There were two questionnaires each designed to investigate student responses regarding their knowledge and experiences of specific topics related to the case under investigation. Both qualitative and quantitative questions were posed to students in the questionnaires. The timing of administration of the questionnaires was also important, as the data were to be used to identify pre- and post-online responses. While students worked online, they were given opportunities to reflect on the learning process through student reflections/discussions in an online forum. Table 5 identifies the three stages at which questionnaires were administered and student online reflections recorded. It is useful to understand the rationale for these instruments and their connection to RQ1.

Table 5: *Outline of the Data Collection Methods and Rationale, and How They Related to the Research Questions*

Stage (1 to 3)	Data Collection Method	Rationale	Research Question
Prior to online activity	Pre-Online Questionnaire	This questionnaire established where students were at the beginning of the program.	RQ1(a) What are initial student perceptions of online learning, interaction, group work and the
During online activity	Student online reflections	These reflections were used to see how students experienced the online environment.	RQ1(b) How do students perceive their experiences in using technology for group work, online learning and the practices of art writing?
After online activity	Post-Online questionnaire, work sample	This questionnaire established whether students' perceptions changed at the end of the program.	RQ1(c) Do student perceptions change as they engage in the unit of work?

RQ1(a) Pre-Online Questionnaire: The aim of this questionnaire was to ascertain baseline skills of students in order to understand their existing technological skills and use of technology. It also investigated how they perceived online learning, and participation in group work, and what they thought about art writing practice and understood it to be. The results are presented under the following headings: Technological Skill, Group Work, Online Learning, Art Writing Practice. The questionnaire was both quantitative and qualitative.

RQ1(b) Student Online Reflections: These were an important qualitative tool as research participants were asked to reflect on their online experience through a discussion forum while they were working online. These reflections were headed: Technological Skill, Group Work, Online Learning, and Art Writing Practice. This data instrument aimed to capture the thoughts and experiences of research participants as they were working through the activities. There were three formal opportunities to record reflection and five questions. As the research participants did not complete every activity in the program, the third reflection opportunity was not taken up. This was

unfortunate; however, the same two questions from this reflection opportunity were re-presented as statements inviting responses in the Feedback Questionnaire. Stronger conclusions could have been drawn with both data sources, but this was not to be. Table 6 outlines the reflection task, timing and questions asked in the student reflection forums.

Table 6: *Online Reflection Tasks, Questions and Timing*

Reflection Tasks	Questions	Timing
1	What are your thoughts on the online learning experience so far?	after first artist forum
2	What were the challenges or difficulties faced in the conceptual framework forum? How has this forum helped with your investigation into your artist?	after conceptual framework forum
3	What has been the challenge of working in a group online? Do you think that working online has improved your art writing practice?	after WIKI forum was not completed

RQ1(c) Post-Feedback Questionnaire: the main aim of this questionnaire was to give formative feedback to the researcher about the Visual Arts Program design and the participation of the students. Topic areas covered in the feedback questionnaire included: Technical Issues 1–5 (QQ1–5), Online Expectations (QQ6–10), Online Activities (QQ11–16), Art Tasks (QQ17–21), Art Writing Practice (QQ22–25), Group Work (QQ26–32), Learning (QQ33–37), E-tutor (QQ38–40), Art Practitioner (QQ41–42) and Improvement of Learning Activities (Q43). This questionnaire was both quantitative and quantitative and used statements and questions. Students had to express a judgement based on the five measures of a Likert scale (McLeod, 2008), namely: Strongly Agree, Agree, Disagree, Strongly Disagree, Not Applicable. Students were also given the opportunity to comment on each section of the questionnaire.

RQ2: Forum Dialogue: It was decided that only one group's dialogue would be investigated using two forums, namely, Task 2: Forum: Who am I? and Task 4a: Forum: Conceptual Framework.

RQ3: Discussion Thread: The so-called CF Doco discussion thread was used here to analyse interaction and the development of a Conceptual Framework document.

Data Analysis: Qualitative and Quantitative Complementary Methods

This case study engaged both qualitative and quantitative methods of data analysis. This mixed method approach was used to give multiple viewpoints of the case under study. The quantitative aspects of this case were not used to generalise findings as the sample was small. However this method was used to isolate and summarise results from questionnaires and forum posts that were useful to interpret better the setting under study. The researcher was concerned for some of the time with detailed reporting, thick descriptions, and interpretations of multiple realities within the study setting. To establish credibility in this study, Lincoln and Guba's (1985) case study inquiry method was sustained in the research by the way the data were collected, assembled, examined and member checked.

Triangulation is one method that is fundamental for the qualitative researcher. The credibility of case study results lies in triangulation by presenting three different points of view of the project. This process is used to measure and confirm internal validity. The research design in the current study used triangulation within data collection to establish its credibility (Lincoln & Guba, 1985; Stake, 1995).

Data analysis was executed using Excel spread sheets, working on printed copies by hand. The pawing method (Ryan & Bernard, 2010) was used as an initial investigation to colour-code student responses locating salient categories, subcategories and themes. Coding of responses was specifically developed as needed to track participant responses from forum discussions. Triangulation of data sources played an important role in the development of these analytical tools.

RQ1(b) Student Reflections Descriptive Data Interpretations: Using a descriptive data interpretation approach (Stake, 1995), responses were broken down into statements. Each new idea

or thought from participant reflections was separated by a direct interpretation made by the researcher. From this the researcher then made assertions about each idea or thought offered by the participant. The aim of this data investigation was to uncover the meaning and possible patterns behind the reflections students made about their perceived experiences. Member checks were used to ensure credibility of the researcher's interpretations. Lincoln and Guba (1985) defined member checking as a process that allows stakeholders or groups involved in a study to test the accuracy of interpretation and the intent of information. Member checking gives research participants the opportunity to make judgements about the constructions that are being made about them within the specific context. This can be an informal or formal process and is seen in naturalistic inquiry as 'the most crucial technique for establishing credibility' (Lincoln & Guba, 1985, p. 314). Research participants in the current study were emailed documents for consideration and asked to comment about their reflection statements and forum discussions. Responses were then coded, by a response number, then more explicitly by the group name and student number, then by response section. For example: Smart Arts Student 1 section a, was coded SAS1a, Arty Farty Homosapians (spelt like this by the students) Student 1 section b was coded AFH1b, and Obelix vs Asterix (also spelt like this by the students) Student 1 section c was coded OvsAS1c etc. These codes were used to track statements in the data and results.

RQ1(b) Student Reflections Statement Coding: To isolate further data for investigation the researcher then decided to statement code the interpreted responses to see if these revealed any patterns. First, each reflection period was colour-coded using the emergent statement codes and then totalled. The responses were sorted into categories under the following statement codes:

- Not Relevant to Discussion
- Technology Problem
- Identifies Own Skills/Not Understanding
- Peer/Teacher Supportive Statement
- Confirming Statement

- Group Responses
- Leading Statements
- Value Online Learning Statements
- Rephrase Question
- Agreement Statement
- Joke Statement
- Emoticon/Emotions Statements

This system of coding was developed and utilised to identify the number of statements in each category. The aim was to highlight salient categories in the reflection responses. This process was then used to refine the statements for further analysis. As the data were analysed, two areas emerged as possible categories to further sub-code. Data from the categories Group Responses and Value Online Learning Statements were chosen as specific areas to categorise further. This choice was made by the researcher due to the large number and variable quality of responses in these two categories.

Group Responses: These responses were sub-coded into three categories to include:

- (1) identifies weakness in the group
- (2) identifies achievement in the group
- (3) identifies with a group perspective on the experience.

These categories were used to gain insight into how students identified with the group.

Value Online Learning Statements: These were subcategorised first into quantitative positive and negative statements that were presented in a comparative chart. The researcher then reviewed the responses to isolate two emergent subcategories of data:

- (1) Positive value comments
- (2) Positive interaction with online practitioner (artist) responses.

These subcategories were presented in text and through a table representing student responses.

RQ2(a) Forum Post Analysis

Quantitative analysis of number and kind of posts: It was necessary to give an overview and total of the quantity and kind of posts and response interactions across the two investigated forums: Who am I? and Conceptual Framework. This is presented through tables and in the text.

Analysis of communication/interaction using emergent theme coding: The aim of this data analysis was to investigate the amount and kind of communication and interaction that was taking place between artist and student, student and student, and student and teacher. There was no teacher/practitioner interaction. This analysis focused on the dialogue and communication of the research participants while working in the online environment in the Who am I? and the Conceptual Framework forums. For consistency the same response coding practices were used to track student and artist responses. The responses were numbered first, then coded; for example, Smart Arts Student 1 section a, b, c was coded SAS1a, b, c, and, as there was only one artist in the group, the coding was numerical, thus: Artist responses 1, 2, etc were coded Artist 1, Artist 2, etc. Emergent and salient themes were established during this process of data investigation.

RQ2(a) Theme Coding: In this instance the theme coding that emerged was based on the interactions that took place during discussions. The researcher isolated responses within posts with four themes that were useful for investigating RQ2(a). These communications were used to investigate Sullivan's (1993) notion of a sense of connection. Themes were identified as follows:

- make connections and relationships
- give in-depth descriptions
- make claims
- draw conclusions

Themes were isolated from the forums and coded first with the discussion thread/response then the student code. For example, Artist 1 SAS1 refers to discussion thread Artist response 1 by Smart Arts Student 1. Results are presented in the text and through tables.

RQ2(b) Processes: The same data were then investigated to isolate the understanding of processes that took place in the discussions. There were two process that warranted investigation: (1) the application of the syllabus scaffolds as examples of the enactment of the syllabus (Freedman, 2003) and (2) the artist giving advice. The latter was an emergent aspect of the data.

(1) Student references and applications to the Frames and Conceptual Framework were isolated through the questions that they asked the artist. The questions were first coded with the discussion thread/response then the student code. For example Artist 1 SAS1 refers to discussion thread Artist response 1 by Smart Arts Student 1. Then each question was appropriately labelled to demonstrate the syllabus:

- Frames: subjective, structural, cultural, postmodern
- Conceptual Framework relationships: artist/artwork, art/audience, artwork/audience, artist/world, artist/artwork
- Art practice: this was also used as a label for interpreting the data.

(2) The artist giving advice to students was an emergent category of data analysis. All the artist's references to advice were isolated for interpretation. Codes related to the discussion thread were used, for example, ARTIST 30, AUDIENCE 23, relates to the discussion thread and the number of the response.

Results for both (1) and (2) are presented in the text and through tables.

RQ3 Products: The aim of this data collection method was to isolate how students created the product from the online interaction with the artist practitioner. Students were asked to choose a colour to write in early on in the online program. This was used consistently through the forums and in the Conceptual Framework document. This was the method used to track the development of the construction of the document.

SAS1 = purple

SAS2 = pink

SAS3 = black

SAS4 = orange

Results here were insufficient due to file loss.

Triangulation in This Research Design

The first level of triangulation was applied to the data and was governed by the Triple P Framework (Ryba et al., 2002; Appendix 4). This approach evaluated the data from three different perspectives and at different phases of the project. At the second level of triangulation, the Triple P Framework also influenced the development and direction of the research questions. Within the program evaluation for RQ1, the student participant points of view were recorded using three different methods of evaluation. Student perceptions were investigated at three different points in time in the program. While interaction analysis was the focus for RQ2, there where three types of interaction analysed using theme coding. The final aspect of triangulation was in RQ3, where student interaction, construction and quality of a final product were investigated. Table 7 visualises the triangulation of the research design.

Table 7: *Triangulation in the Research Design*

LEVEL 1 TRIANGULATION: TRIPLE P FRAMEWORK		
Perceptions	Processes	Products
LEVEL 2 TRIANGULATION: RESEARCH QUESTIONS		
RQ1	RQ2	RQ3
LEVEL 3 TRIANGULATION: DATA INSTRUMENTS		
Pre-Online Questionnaire	Analysis of interaction and meaningful communication <ul style="list-style-type: none"> • Student / Artist • Student / Student • Student / Teacher 	Analysis of Interaction Student / Student
Student Online Reflection		Tracking construction of Conceptual Framework Document
Post-Feedback Questionnaire		Quality

Methodology: Qualitative Research in Technology

The principal research strategy was qualitative; thus it is important to outline the method relevant for investigation in this particular case study. Qualitative methods have emerged from within social sciences and humanities approaches to research and theory interpretation. Anthropology and the study of society and culture are at the root of the qualitative research field. ‘Qualitative inquiry accepts the complex and dynamic quality of the social world’ (Hoepfl, 1997, p. 48). Denzin and Lincoln (1998) stated that ‘qualitative research operates in a complex field that crosscuts five historical moments’ (Denzin & Lincoln, 1998, p. 2). The moments or periods can be listed as follows:

- The Traditional (1900–1950)
- The Modernist (1950–1970)
- Blurred Genres (1970–1986)
- The Crisis of Representation (1986–1990)
- Postmodern (1990–present)

These periods have amplified the many facets of what it means to apply qualitative methods to present-day research. It is also impossible to grasp the depth of the qualitative research field without comprehending the historical phases of its inception. It is also understood by academics and researchers that qualitative research is difficult to define as it has ‘no theory or paradigm that is distinctly its own’ (Denzin & Lincoln, 1998, p. 5). Nevertheless Denzin and Lincoln presented a generic definition:

Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach ... involves the studied uses and collection of a variety of empirical materials – case study, personal experience, introspective, life story, interview, observational, historical, interactional and visual texts (Denzin & Lincoln, 1998, p. 3).

Under educational conditions, qualitative researchers have adopted many traditional and emerging methods to investigate a range of contexts where student/teacher relationships exist. The natural setting of the learning environment, which in recent times has become more flexible, is the main site where this kind of research takes place. The emergent capacity of qualitative research makes it suitable for educational researchers. Emergent research ‘seeks to observe and interpret meanings in context, it is neither possible nor appropriate to finalise research strategies before data collection has begun’ (Patton, 1990, in Hoepfl, 1997, p. 51). This phenomenon is the driving force behind qualitative research.

Marie Hoepfl, in her paper ‘Choosing Qualitative Research: A Primer for Technology Education Researchers’ provided a reliable description of eight prominent features of qualitative research design. She presented a checklist that is a synthesis of a number of authors’ views on the subject (Bogdan & Biklen, 1985; Eisner, 1991, in Hoepfl 1997; Lincoln & Guba, 1985; Patton, 1990). Hoepfl’s checklist covered:

Characteristics of Qualitative Research

- use of *natural setting* as the source of data
- researcher acts as '*human instrument*'
- predominantly *inductive* data analysis
- research reports are *descriptive*
- research has an *interpretive* character
- researchers view idiosyncrasies and *uniqueness* of case
- research has an *emergent* design
- research is judged using special criteria of *trustworthiness*

These characteristics identify that the qualitative study is indicative of context, human interaction and observation, reasoning and emerging themes, thick description and interpretation within the bounds of a specific phenomenon, with particular interest in the unique. Research design is inconclusive until data are collected, and dependability needs distinctive measures. This is not to discredit the validity and credibility of qualitative research design. Rather, this list explicates a divergent approach to identifying primary research questions and workable hypotheses within a qualitative study. These characteristics are also found in the research methods of Robert E. Stake (1995).

The Single Case Study Approach

The educational research methodology adopted in this study was a case study approach. Stake argued the merits of a single case study approach to research in the educational field. He identified aspects of educational research that are specifically relevant to the present study and its goals of documenting and evaluating emergent educational research by means of a single case. Stake identified that a 'case study is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances' (Stake, 1995, p. xi). The present

case study was concerned with a program evaluation where the case study was a unique case (Stake, 1995) in an art educational context, occurring online, where participants were working with art practitioners and their teachers. Units for analysis were gathered from a pre-online questionnaire, online dialogue interactions, online participant reflections, a post-online questionnaire and online products that were then used as records for examination. The aim was to provide formative evaluation of this case using the intrinsic approach to case study research (Stake, 1995). Direct interpretation and narrative description drew assertions from the observations of the case. Meaning was contextual within the limitations of the project (Yin, 1984). The role of the researcher in this case was as evaluator.

The Case Study Model

The model for this case study was developed from the research undertaken in the literature, principally one current online learning design structure and one evaluative framework. Gilly Salmon's (2002) Five-Stage Online Learning Model was used to develop, organise and sequence the content, delivery and instruction of the online component of the program. The principles of this model were used to promote collaborative group activity and successful online interaction. Whereas Ryba et al. (2002) offered a qualitative data direction, the Triple P Framework, which provided a structure to formulate effective research questions.

The focus of this program design model was to:

- identify specific online interaction
- investigate where participants have engaged in dialogue through the carefully structured e-tivities utilising a social-constructivist learning environment MOODLE.
- reflect on student perceptions of their experiences.

Both the model and framework view the case in detail from multiple viewpoints and are consistent with the aims of formative evaluation of a single case with a small sample of participants. Other models were initially explored through the literature review, for example, those of Jonassen et al. (1999) and Lave and Wenger (1991), but these models were deemed too broad for the investigation of this singular case. It is important to note that the New South Wales Visual Arts Syllabus was also a framework that was used to design the content of the program and online activities.

Figure 5, diagrammatically represents the Visual Arts Program design developed by the researcher for the purposes of understanding interaction in the Visual Arts classroom. The figure identifies the context, the use of the models, the research framework and the points at which the research questions were devised for investigation of the case. The following paragraphs illustrate and explain how these have been interpreted and used in the case study design.

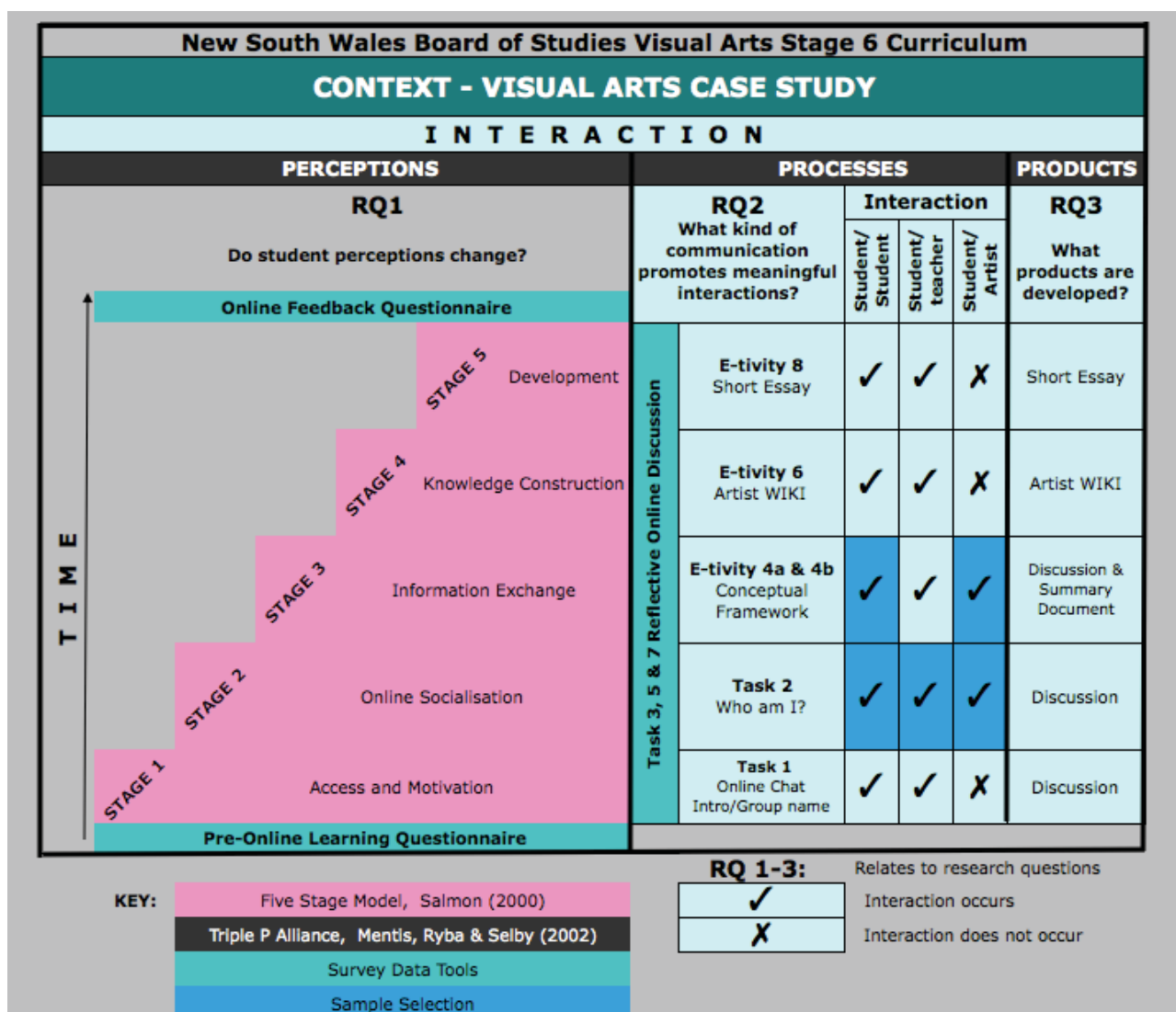


Figure 5: Program design model for identifying online interaction in art

Program Context

The New South Wales Board of Studies Visual Arts Stage 6 Syllabus was the framework for the instructional components of this unit of work. A Visual Arts Case Study is defined in the syllabus as working to ‘provide a means of studying particular cases in the Visual Arts. Their function within the classroom is to illustrate a point or something of significance’ (NSW BOS Visual Arts Stage 6 Curriculum, 2009, p. 33). In the context of the Stage 6 Syllabus, meaning and value of the case, is determined by the teacher. This is the most important aspect of the Visual Arts Case Study to exemplify the conceptual understanding of Visual Arts. The Visual Arts Case Study was the context for this program design. The design was unique as it not just utilised the classroom

and secondary resources but provided access to art practitioners. This primary reference offered students an opportunity to understand first-hand the practices of art as they studied the artist and came to appreciate the significance of their work. It utilised the Conceptual Framework scaffold (See Appendix 5) as an investigative tool for developing questions for discussion with art practitioners and for developing a summary of their findings for presentation.

The Visual Arts Program Design

The design of the program of work, *Art Prizes in Australia* (Appendices 6 and 7), was conceived from the need for the Redlands art collection to become an integral part of the teaching and learning resources in the school's Visual Arts Curriculum. The researcher aimed to develop an innovative unit of work that would allow students and teacher's access to galleries, artworks in the collection, and associated art practitioners. It was decided early on that access to the art practitioner was critical to the success of the program and would give the students a real-world experience. This motivation determined the direction and development of the unit of work to include an online identity guessing game and discussion components for interaction with the art practitioner. This social context for learning was supported by the MOODLE online platform. As this unit was class work, and the blended approach to online learning was selected for the case study. The unit of work, comprising ten online tasks and one or two face-to-face periods a week, was estimated to take eight weeks to complete. The addition of gallery visits and viewing of the school's art collection was important to develop student understanding of art practice and of the art world as a context for learning.

For the purposes of this study a snapshot of the blended learning activities is presented here. Time constraints imposed by the Higher School Certificate examinations in this and other subject areas meant not all program components were completed online. These particular aspects are illustrated by the shaded areas in Table 8.

Table 8: *Visual Arts Program Activity Overview*

Wk	Face-to-Face Activities	Gallery Activities	Online Activities
1	Introduce case study on RWAP, class discussion, articles on art prizes; establish what constitutes an art prize? (1 hr) Introduce MOODLE interface (1 hr) Complete Pre-Online Questionnaire using MOODLE (20 mins) (Establish online groups from questionnaire data)	View and document the RWAP collection. (1 hr) Curator's presentation (1 hr)	<i>Access and Motivation:</i> Task 1 Live Chat: Net name, introduction, establishing group name (2 hrs)
2	Research RWAP Website (1 hr)	Visit Archibald Prize: focus on the judge and the critic	<i>Socialisation:</i> Task 2 Forum: Who Am I? discussion with artist (1 hr) Task 4 Reflections Forum (30 mins)
3	View RWAP Collection and group-specific artwork. Discuss and generate questions for Conceptual Framework Discussion based on the Artist, Artwork, World, Audience (2 hrs)		<i>Information Exchange:</i> Task 4a Forum: Artist investigation; dialogue with artist online, using formulated questions for artist; investigation of the Conceptual Framework (2-3 hrs across two weeks)
4	Group time in class to follow up on MOODLE and task at hand (1 hr) Look at other art prizes in Australia through articles. Discuss what constitutes an art prize (1 hr)	None	Task 4b Show and Tell: Emergent forum, where students discuss their own work with artists
5	Group presentations on artist investigations of the Conceptual Framework (1-2 hrs) Class teacher feedback	None	Task 5: Reflections Forum (30 mins)
6	Group time in class to follow up on MOODLE progress (1 hr)	None	<i>Knowledge Construction:</i> Task 6: Construct Artists' Wikis (3 hrs)
7	Group time in class to follow up on MOODLE progress (1 hr)	None	
			Task 7: Reflections Forum (30 mins)
8	Group time in class to follow up MOODLE progress. (1hr per wk) Evaluation of face-to-face and situated experiences (1hr)	None	<i>Development:</i> Task 8: Short Essay on Art Prizes in Australia answering a specific question. (2 hrs per wk) Submit final essay Complete online questionnaire Mentor online feedback

Interaction

As this unit of work was concerned with a blended approach to learning, engaging a mixed mode delivery method of face-to-face and online interaction, it was decided that only a selection of online interactions and pre-, mid-, and post-online reflections and questionnaires would be the subject of investigation. The types of interaction under investigation included student-student, student-artist and student-teacher. This was not intended to narrow the investigation but to make the data sources and data analysis manageable and to focus on the particularities of the specific interactions that took place.

Vygotsky: The Zone of Proximal Development (ZPD)

The ZPD was referred to in the program design because the ZPD is an inherent part of the social context in which online learning occurs. Interaction is the overarching concept towards which this research investigation was aimed. The online learning activities were designed specifically for students to interact with adult art practitioners. This was significant as the social context for learning and the social organisation of instruction are critical concepts in Vygotsky's theory for higher psychological processes. The teacher was placed in a support role, encouraging students to engage with art practitioners. This case study was not concerned with elucidating individual participants' ZPDs and whether they have widened. The use of this theoretical point of view was to ensure the researcher had designed the online learning activities to maximise students' ability to interact with adult practitioners within the MOODLE context.

Perceptions: The Use of Salmon's Five-Stage Model

The Five-Stage Model was useful in this case study design as it offered a level of support for participants as they negotiated the online program. The Five-Stage Model was chosen to ensure that participants were supported in the online environment and to avoid common problems related to participation in online coursework. The asynchronous nature of online learning was at the core of

the model. The model was underpinned with constructivist notions this included information exchange and knowledge construction. It was based on progressing through the steps of interactivity that take place in a given online group experience. The model was also useful for the researcher to define, simplify, and arrange online activities as they dovetailed with face-to-face lesson experiences in classroom and gallery settings. This model was used to organise the online environment and activities and to enable users to have success in their program of work with online interactions. The focal point of this program model was the engagement of participants in online collaborative groups. Central to each stage was the challenge of the individual participant within group interactions and the pacing and timing of each activity. Movement through the stages could differ between participants. It is important to note that this study was not in any sense interested in testing whether students progressed through the stages or arrived at all the steps in their experiences. In this case study, face-to-face support and activities were also offered to support and encourage greater success with the new teaching and learning medium. Activity level blending (Graham 2005) was chosen as the approach to ensure that the demands that the tasks within the unit placed on the students could be met.

Processes: The Triple P Framework

The Triple P Framework offered this case study the structure to develop research questions from multiple points of view. The three areas of analysis in this framework, as defined by Ryba et al. (2002), are:

- (1) *Perceptions*: students' own views about their feelings and experiences
- (2) *Processes*: analysis of online interaction patterns and of the content of cognitive and metacognitive processing
- (3) *Products*: observable outcomes of learning in the form of publications, reports, folios, and lists of resources.

What is significant is that Ryba et al. (2002) also used Salmon's Five-Stage Model to organise their evaluative questions. In the current study, however, this analytical structure was primarily used to triangulate the formative evaluation of the study. It was not the intention of this investigation to answer all the questions offered by this framework. Rather, the focus was to determine the structure of the research questions to be used in the triangulation of the research design.

Products

Within the online learning activities there were three products that were set as tasks for students to complete: the Conceptual Framework summary; an oral presentation; and the artist's wiki, together with a short essay on art prizes in Australia. The products that were developed by the students included a summary of the Conceptual Framework discussions with the artist and, for one group, the artist's wiki. Students were guided to summarise their questions and dialogue with the art practitioner and to create a Conceptual Framework summary document that was to be delivered in the face-to-face environment as a presentation to the class.

CHAPTER 4 – RESULTS AND DISCUSSION

Introduction

This chapter summarises the results of the study. It is presented under headings that correspond to the research questions. As both qualitative and quantitative investigations generated the results, discussion is also included, using as subheadings topics that led or emerged from the research. RQ1 investigated the social context for learning by investigating student perceptions and how they may have changed during the program. RQ2 investigated the meaningful communication and interactions that occurred while enacting part of the Visual Arts Curriculum. An emergent process, the artist giving advice, is also documented here. RQ3 investigated the products that the students created while working online. This question relates, in part, to RQ2, as responses to it provided evidence of the process of implementing the Visual Arts Curriculum. However, due to data loss this question was not effectively concluded. In the next chapter, conclusions and recommendations will be presented.

RQ1(a) Results

What are student initial perceptions of online learning, interaction, group work and the practice of art writing?

Pre-Online Questionnaire Results

The results from this questionnaire were grouped into three broad areas of interest: Technical Skill, Group Work and Art Writing Practice. In the interest of clarity, results are discussed under these headings.

1. Technical Skill – includes perceptions of online learning and interaction

The twelve student participants in the study group had daily access to the internet during the online component of the work unit. One student, however, was moving house, so for some of the

time, access to the internet was possible from school only. One student was absent. Nine students indicated that they engaged in social activities using chatroom and forums, and all students indicated that they accessed email. The use of software programs such as Word, Powerpoint and Excel also indicated that students used technology for schoolwork outcomes. Interestingly the majority of students perceived that they were advanced users of technology. Referring to Question 9 in the questionnaire, half the sample perceived that they had not previously completed online activities or coursework. This suggests either of two possibilities. One, that online learning is not a commonly used pedagogy in the school setting in all subjects and by all teachers; and two, the counterintuitive but still plausible situation that research participants have indeed completed online learning activities as part of coursework but have failed to recognise that it was online learning. Table 9 summarises results from the first section of the questionnaire, from Question 1 to Question 9. Question 10 will be addressed separately. Results from Question 3 are also not reported here as they are not relevant to RQ1(a).

Table 9: *Technical Skills: Summary of Results*

RQ1 (a) RESULTS: 11/12 students (SS) responded to the questionnaire								
Technical Skill Level								
Question	Student Responses (SS1–11)							
1. How would you rate your skill level in using computer technology?	BEGINNER	0	INTERMEDIATE	2	ADVANCED	9		
2. How regularly do you use a computer?	DAILY	10	WEEKLY	1	MONTHLY		NEVER	0
3. What kind of software programs do you use most? (Not reported in these results)								
4. How competent are you at using Word, Powerpoint, Excel or similar software?	BEGINNER	0	INTERMEDIATE	3	ADVANCED	8		
5. Do you have internet access at home?	YES	10	NO	1				
6. How often do you use the internet?	DAILY	10	WEEKLY	1	MONTHLY	0	NEVER	0
7. Do you use email?	YES	11	NO	0				
8. Do you use chatrooms/forums?	YES	9	NO	2				
9. Have you completed any type of coursework online?	YES	6	NO	5				

Question 10 in the questionnaire asked the student participants: *What do you think online learning is?* They were asked to write a response to this question in their own words. All eleven responded; see Appendix 8 for their responses. When the responses were assessed, the researcher found five participants presented statements indicating that they were unsure of the meaning of online learning. Two participants believed that online learning is a knowledge acquisition process and three participants identified interaction as a process of working online; within those responses two students mentioned discussion as an element of online learning. From this data only three of the eleven participants indicated an appreciation that online learning includes some kind of interaction with others. This could be due to the fact that all computer tasks students engage in at school are viewed as examples of online learning. From this data analysis it appears that the participants in this sample did not have a good understanding of the concept of online learning. The data suggest that the lack of familiarity with the term and concept of online learning indicates that perhaps online learning is perceived by student participants to be the same as a computer-based tasks, for example, web quest, or searching the internet for information.

Responses to Questions 9 and 10 in the Pre-Online Questionnaire indicate that student participants had a limited understanding of the concept of online learning. A tentative conclusion that could be drawn from this instance is that online learning is not widely used as a pedagogical tool in this school setting.

Recommendation

A useful follow-up question for students in future studies would be: Can you describe or list other online learning experiences you have had at school? It may also be useful to have a questionnaire for teachers to complete to see what their perceptions of online learning are?

2. Group Work

Table 10 summarises the five questions that were used to isolate the student participants' previous experience of group work.

Table 10: *Pre-Online Learning Questionnaire Group Work Questions*

RQ1(a)
Pre-Online Learning Group Work Questions
11. Describe some situations where you have worked as part of a group.
12. How do you feel about group work?
13. What problems have you experienced in the past in group work situations? Give specific examples.
14. What positive experiences have you had with group work?
15. Which of the following roles best describes you within a group? Leader/Coordinator/Secretary/Participant/Observer

The questions were designed to identify what kind of group situations students had previously participated in and how they perceived their experiences, either positively or negatively. Research participants were asked to write in their own words and to give specific examples wherever possible. Participant responses were coded as Student 1 (S1) etc and will be referred to in this abbreviated manner from here on.

Question 11 identified, through description, the range of situations where participants had done group work. The question was left open to invite any group situation rather than limiting responses to a school setting. All but two students mentioned group work as an element of learning in the school setting. S2 referred to work as a situation where they had worked in a group. Four students mentioned previous online experiences and identified the MOODLE platform, and forums as examples.

Question 12 was a subjective question that investigated how students felt about group work. S11 was the only student in the sample to highlight an absence of a positive experience when working in a group and that they preferred to work individually. Most students highlighted the positive and negative sides of group work in their responses. Others mentioned only positive reflections about their group experiences at school. It is evident from the responses that all students had previous experience in some kind of group work.

Question 13 identified specific problems that are inherent within group work situations. The three main problems highlighted in student participant responses were:

- (1) an uneven division of labour
- (2) different levels of motivation among members of the group
- (3) group members who are not interested in others' opinions.

Question 14 probed participants for examples of positive experiences while within group situations. Generally all participants saw group work as a positive experience. Interestingly, S11 valued interaction with others if it were to have a possible benefit or provide an avenue for personal improvement. S9 mentioned motivation as a strong component of group work and S5 stated that working with others improves the outcome.

Question 15 asked participants to give themselves a role in a group situation: Were they a Leader, Coordinator, Participant, or Observer? Seven of the eleven student participants saw themselves as leaders willing to lead group work and not just participate.

Overall, this section of the Pre-Online Questionnaire identified that the participants valued group work and expected it to be part of their learning experiences. The negatives that were identified are probably typical of members of any group and are not particular to this setting or group of research participants.

3. Art Writing Practice

The questions in this section asked students to reflect on their understanding of art writing practice. The three questions were designed to establish what students may or may not know about the subject they are studying.

Table 11: *Art Writing Practice: Summary of Student Responses*

RQ1(a) RESULTS	
Art Writing Practice	
Question	Student Responses (SS1–11)
16. What is your understanding of art writing?	S3, S4, S8 gave a value judgement e.g. basic/high S1, S9, S10 referred to the syllabus components e.g. Frames, Conceptual Framework, Art History, Art Criticism S2, S11 referred to the context and forms of art S5 rephrased the question S6 wrote ' <i>I honestly don't know</i> ' S7, S11 referred to an essay as a form of writing
17. What makes art writing difficult for you?	S2, S5, S7, S8, S11 made some reference to art techniques/concepts specific to the subject S1, S3, S4, S6, S9, S10 gave non-subject-specific answers that were grounded in language
18. What kind of support do you think you need to improve your art writing?	S1, S5 gave responses that were not relevant to the question S2, S3, S4, S7, S8, S9, S10, S11 gave general, non-subject-specific answers that were language-based and could be applied to any particular subject

Generally the student answers did not indicate an appreciation that art writing is a specific form of text genre, for example, historical or critical. This could indicate that the students had not been explicitly taught these forms were not engaging in art historical and critical reading beyond the course content and viewed this type of art writing as specific to answering course-related questions. Which maybe due to the habit or convention that writing about art at the school level is mainly confined to examinations.

What is clear is that participants identified language structures, ways of thinking, key words, and unpacking examination questions as difficulties. Others, focused on essays or writing practice as a way of improvement, this, again indicates a focus on examinations or questions that students are used to answering in a course context. These responses were not subject specific and could be applied to any course in the school.

Recommendation: Establish an activity in the senior course program that defines and highlights examples of the two aspects of art writing practice to enable students to develop a deeper and more coherent understanding of them as they play a role within the wider context of the art world.

RQ1(b) Results

How do students perceive their experiences in using technology for group work, online learning and the practices of art writing?

For this part of RQ1(b), student online reflections were collected at two of the possible three collection points in the online component of the program. Students were asked to reflect on their experiences while working online. Below is a summary of all of the posts from each group in each reflection forum. This gives an overview of the number of posts and identifies which group/s were the most active in this online period.

Table 12: *Reflection Questions and Total Student Group Posts*

RQ1 (b) RESULTS				
FORUM	GROUP POSTS			TOTAL
GROUP NAMES	SA	AFH	OvsA	
Task 3 Reflection Forum				
1) What are your thoughts on the online learning experience so far?	14	15	4	33
Task 5 Reflection Forum				
1) What were the challenges or difficulties faced in the conceptual framework forum?	5	3	3	11
2) How has this forum helped with your investigation into your artist?				
Task 8 Reflection Forum	Not administered due to time constraints			
1) What have been the challenges of working in a group online?				
2) Do you think that working online has improved your art writing practice?				
TOTALS	19	18	7	44

The most active group was the SA group, with 19 responses; this group was followed closely by the AFH group, with 18 posts. The OvsA group had the fewest responses, with a total of 7 posts. The data from the two reflection periods were analysed by using the data tool: Statement Coding. The following table displays a comparison of the two reflection tasks, 3 and 5, and gives the total responses in each statement category.

Table 13: *Comparison of Task 3 and Task 5 Reflection Statements*

RQ1 (b) RESULTS			
Tasks 3 and 5 Reflection Statements – All Participants			
Statement Category	Task 3 Responses	Task 5 Responses	Total Responses
Not Relevant to Discussion	11	0	11
Technology Problem	4	5	9
Identifies Own Skills/Not Understanding	4	4	8
Peer/Teacher Supportive Statement	6	2	8
Confirming Statement	3	0	3
Group Responses	7	2	9
Leading Statements	2	0	2
Value Online Learning Statements	24	15	39
Rephrase Question	7	5	12
Agreement Statement	7	4	11
Joke Statements	6	1	7
Emoticon/Emotions Statements	8	2	10

To establish a logical way to track the number, kind and sequence of responses, each student response was given a number and a corresponding code with a letter to indicate a new response or part of a response. For example, Smart Arts Student 1 responses a, b, c, were coded SAS1a, b, c. This ensured that the researcher could track where responses came from in the original dialogue and that readers could follow Appendices 9, 10 a, and 10b, and Table 12.

After considering the type of responses that would best answer the aspects of RQ1(b), the researcher decided to focus on only the coded responses in the Group Responses and Value Online Learning Statements categories. Responses in the categories shaded in grey in the table above related specifically to two aspects of RQ1(b) as they offered insights into participant perceptions while working with the online program. In analysing posts related to Group Responses and Value

Online Learning Statements (categories in grey), statements resulting from Task 3 and Task 5 will be considered separately.

With regard to the reflection questions, the Task 3 question was both more subjective and easier to respond to than the Task 5 question, which is possibly why there were more responses to the Task 3 question. The Task 5 question asked for specific examples of difficulties encountered with a particular forum; this question was structured in this way to elicit more objective responses. The responses in the first reflection period were the most numerous from the three forums. This could indicate that interest in the online program dropped off as students worked with it or it may indicate that the latter question was harder to answer in the time available.

Group Responses

There were 9 group responses: 7 in the first reflection and 2 in the second. These can be sorted as responding directly to the functioning of the group online, and can be grouped according to three categories:

- (1) identifies weakness in the group
- (2) identifies achievement in the group
- (3) identifies with a group perspective and experience.

There were 4 specific responses to the group perspective related to the online experience that demonstrated how students felt about the group. SAS2u, v,¹² AFHS3g and SAS1u commented on the group perspective, not just the student's own experience. Phrases such as '*We've all managed*' and '*We've worked together*' demonstrate that the students were reflecting on their ability to understand and work together in the new learning environment. Achievement and

¹² Responses were coded by a response number, then more explicitly by the group name and student number, then by the response section. For example, Smart Arts Student 1 section a was coded SAS1a, Arty Farty Homosapians [*sic*] Student 1 section b was coded AFH1b, and Obelix [*sic*] vs Asterix [*sic*] Student 1 section c etc was coded OvsAS1c etc.

weakness statements are related to these reflection responses. SAS2v and AFHS1e are examples of this.

The responses demonstrate some understanding of the functionality of a group in these reflection statements. The responses are identifying with weakness and achievement within a group. The fact that students were identifying strengths and weaknesses of the group and were looking at the structure of the group, as opposed to just the outcome of the task, is a positive outcome. It shows that the students were not only working face-to-face but also collaboratively in an online environment.

Value Online Learning Statements

There were 39 responses in total that referred to the value of online learning in the online reflection forums. There were 24 in the first reflection (Task 3) and 15 in the second (Task 5). The chart below compares the total number of negative and positive responses about online learning.

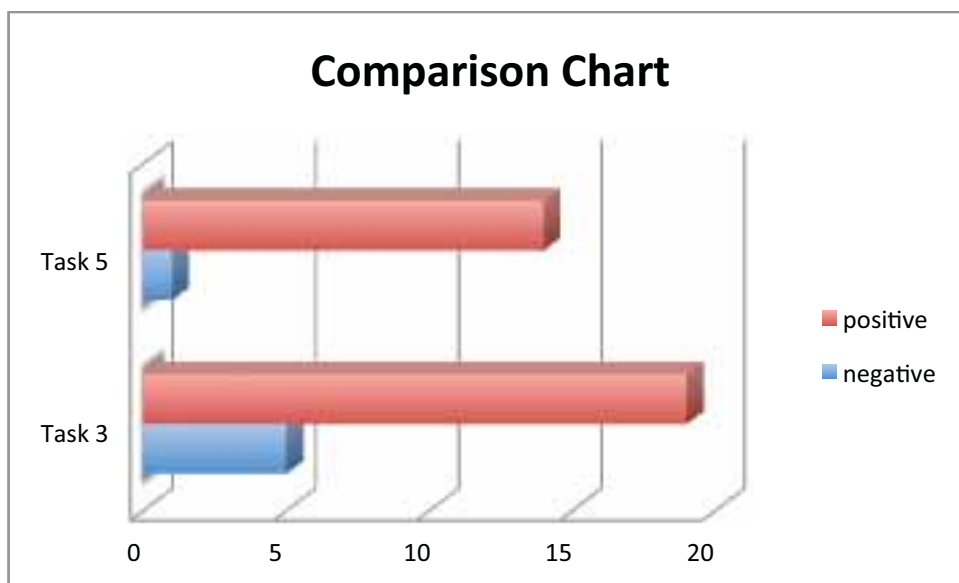


Figure 6: *Comparison of positive and negative student responses in tasks 3 and 5*

Negative responses were made early in the first reflection period. In SA Group, Student 3 (SAS3) offered four responses: SAS3e, f, g and h (see Appendix 10a). In response SAS3e, the student acknowledged that she was far more comfortable with face-to-face interactions and

traditional writing methods, while in response SAS3f, she indicated that she knew technology was advancing and will improve as she had experienced access issues related to poor hardware at the beginning of the unit. In the SAS3g response, she reiterated that she was not comfortable with the online medium and, in SAS3h, she gave an example, explaining that online learning (chat) was difficult due to timing matters. While Student 3 (S3) from the Obelix vs Asterix Group (OvsA) provided a negative response in both forums (see OvsAS3f and h in Appendices 10a and 10b), the first response was not directly related to online learning but the broader use of the internet. OvsAS3f indicated the shortcomings of the quality of information on the internet, while OvsAS3h later referred to the time lag associated with some asynchronous discussion.

The number of positive responses was larger than the number of negative ones. The following two subcategories emerged from the data:

(1) Positive value comments

(2) Positive interaction with online practitioner (artist) responses.

Positive Value Comments: There were 8 positive value comments made directly about the online learning experience. SAS1k, SAS4a, SAS2t and x, AFAS3a, AFHS2d, AFHS3e, AFHS3l, and OvsASd used words such as ‘good’, ‘very good’, ‘successful’, ‘fun’, and ‘exciting’ to describe the experience. As part of these responses, some students gave examples about the online environment being ‘new’ and about the process of interaction and communication with the artist as being part of the success or positive nature of the experience.

Positive Interaction with Online Practitioner: In total there were 11 responses that referred to the process of interacting or communicating with the artist. Table 14 summarises the responses.

Table 14: *Student Responses Highlighting Positive Interaction with the Online Artist Practitioner*

RQ1(b) RESULTS		
Positive Interactions with Online Practitioner (artist)		
Response Number	Responses Coded	Verbatim Excerpt from Response
12	SAS4e	<i>and it is really great that we are actually taking to artists about their works so easily</i>
19	OvsAS1a	<i>its good to be able to have something real to talk to, rather than a book or an article</i>
20	OvsAS2b	<i>its so much more exciting then reading everything</i>
22	OvsAS3c	<i>nah its really good to be able to actually communicate and discuss with someone instead of just reading about them</i>
23	OvsAS3d	<i>We can actually get the facts we need straight from the person instead of trying to find things out about them</i>
28	SAS1t	<i>It has helped i feel, as we can ask questions about the artist, artwork world, etc</i>
31	AFHS2h	<i>I think this was a really good experience for us to get an inside to (the correct words here would have been 'insight into') how a successful artist works</i>
32	AFHS2i	<i>and for us to be able to chat to them and ask them anything!</i>
34	AFHS2m	<i>but it was very good task because we got the exact answers we wanted and we know the info was correct because it came straight from the artists mouth</i>
37	OvsAS1e	<i>and actually see that artists perspective</i>
39	OvsAS3k	<i>but yeah ... it is much better than just looking through text books cos you actually get a definite response to what you want to know</i>

The responses show that students valued the accuracy and ease of access to information via the primary source of the practitioner. The reflection statements can be identified as demonstrating a valuable interaction with the practitioner across all groups in both reflection periods. Statements offered judgements about the success of the program and the effectiveness of the online context. This may indicate a sustained satisfaction among the participating students with the online environment and the environment's ability to create opportunities for real-world interactions.

In addition, in progressing from Task 3 to Task 5, negativity in the reflections decreased. This could reflect students' growth in comfort with the online experience.

Art Writing Practices

As Task 8 reflection was not completed during the time allowed for this unit, the perception about students' art writing during this period of the unit could not be analysed. This is an emergent limitation of the study.

RQ1(c) Results

Do student perceptions change as they engage in the unit of work?

Online Feedback Questionnaire

The answers to the last part of Research Question 1, that is, RQ1(c), were sought by an Online Feedback Questionnaire. It was used to gather results from a feedback point at the end of the online learning experience, giving an opportunity for triangulation and for drawing possible conclusions.

Students were asked to complete 43 questions (QQ1–43) in an online questionnaire covering the following areas: Technical Issues (QQ1–5), Unit Expectations (QQ6–10), Online Activities (QQ11–16), Art Tasks (QQ17–21), Art Writing Practice (QQ22–25), Group Work (QQ26–32), Learning (QQ33–37), E-tutor (QQ38–40), Art Practitioner (QQ41–42), Improvement to Learning Activities (Q43). The questions were structured using the values: Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD) and Not Applicable (NA). Appendix 3 gives the reader an

overview of the questions. Students were also given the opportunity to write answers to the following questions: QQ5, 16, 21, 32, 43. As this feedback questionnaire was developed to assess online work, the term ‘e-tivity’ (Salmon, 2000) was used to describe online activities.

There were 9 out of 12 students who responded to the Online Feedback Questionnaire. There was one unintended error with a group task question (Q29), where students were not able to respond because of a technical error in the survey design in MOODLE. This is another emergent limitation of the study.

Figures 8 to 16 below summarise the feedback according to the section headings in the questionnaire; after each graph the results are discussed. Student responses are represented by codes S1 to S9 (Student 1 to Student 9).

RQ1(c) Results: Technical Issues: QQ1–5

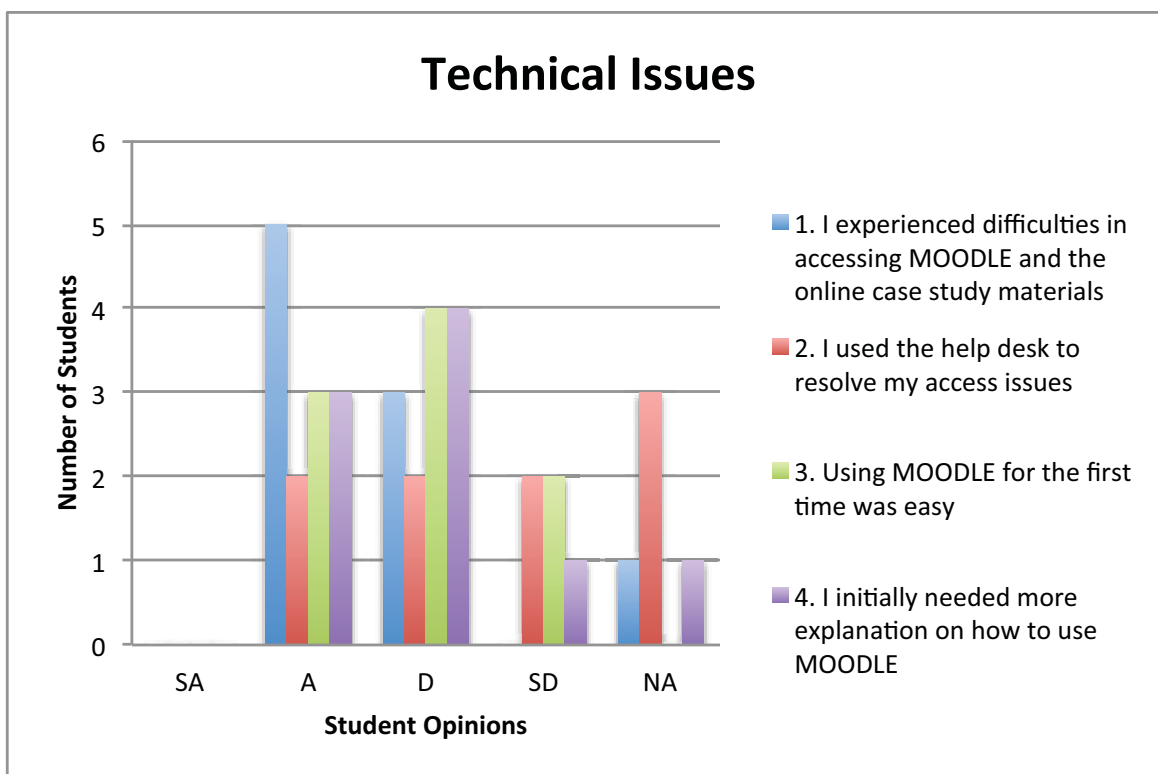


Figure 7: *Student opinions about technical issues, QQ1–4*

Five students agreed that they experienced difficulties with using MOODLE but only two used the help desk. Possible reasons for not using it was that it was not obvious how to access it on the MOODLE interface or that students preferred face-to-face help in class. Q3 responses confirm this result: six students did not find using MOODLE for the first time easy. The responses to Q4 do not seem to support the students' claims of having difficulties in using MOODLE as only three felt more initial explanation would have been useful.

While the numbers in this sample do not render the results statistically valid, the feedback poses some interesting questions concerning student's ability to use new software and their preferences in accessing assistance when faced with problems. This is partially addressed by the responses to Q5.

Q5: *I was able to overcome issues online by ...* There were 7 student responses: S1 simply stated '*I could really*', while SS2, 7, 8 and 9 all indicated that they overcame technical issues by talking to the teacher or friends. S4 downloaded software to resolve their problem and S6 went to the IT Department to update their password and login.

RQ1(c) Results: Unit Expectations: QQ6–10

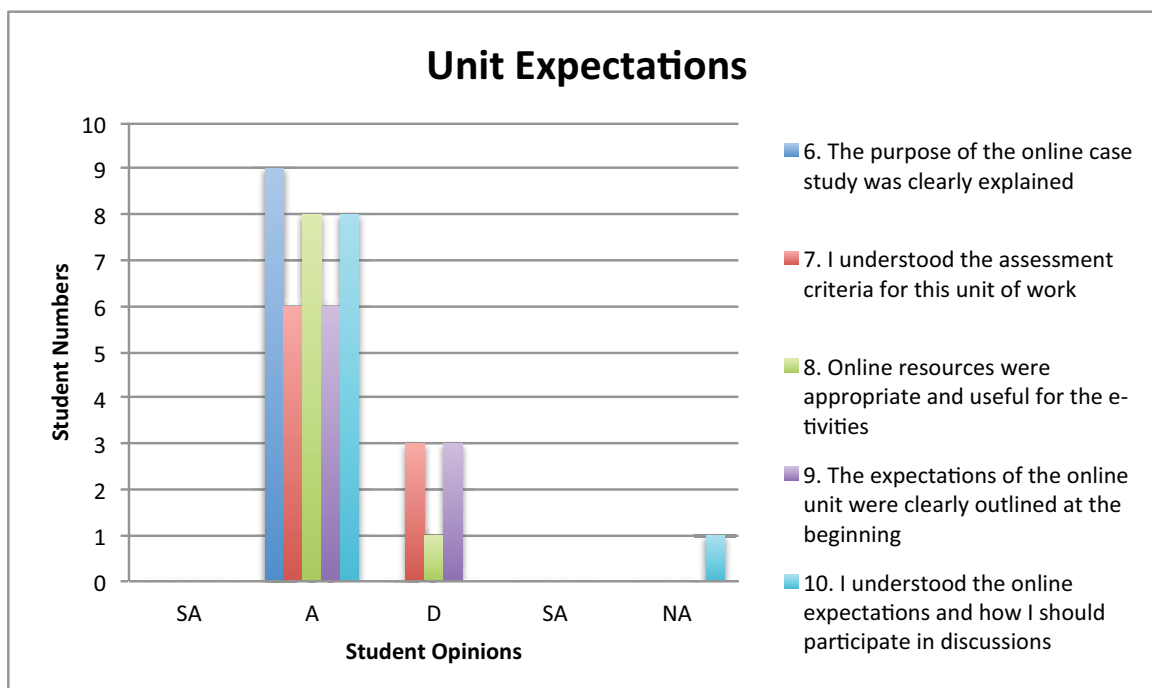


Figure 8: *Student opinions about unit expectations, QQ6–10*

The responses to QQ 6 to 10 strongly indicate that the expectations of the online unit were clearly understood by the participants.

RQ1(c) Results: Online Activities: QQ11–15

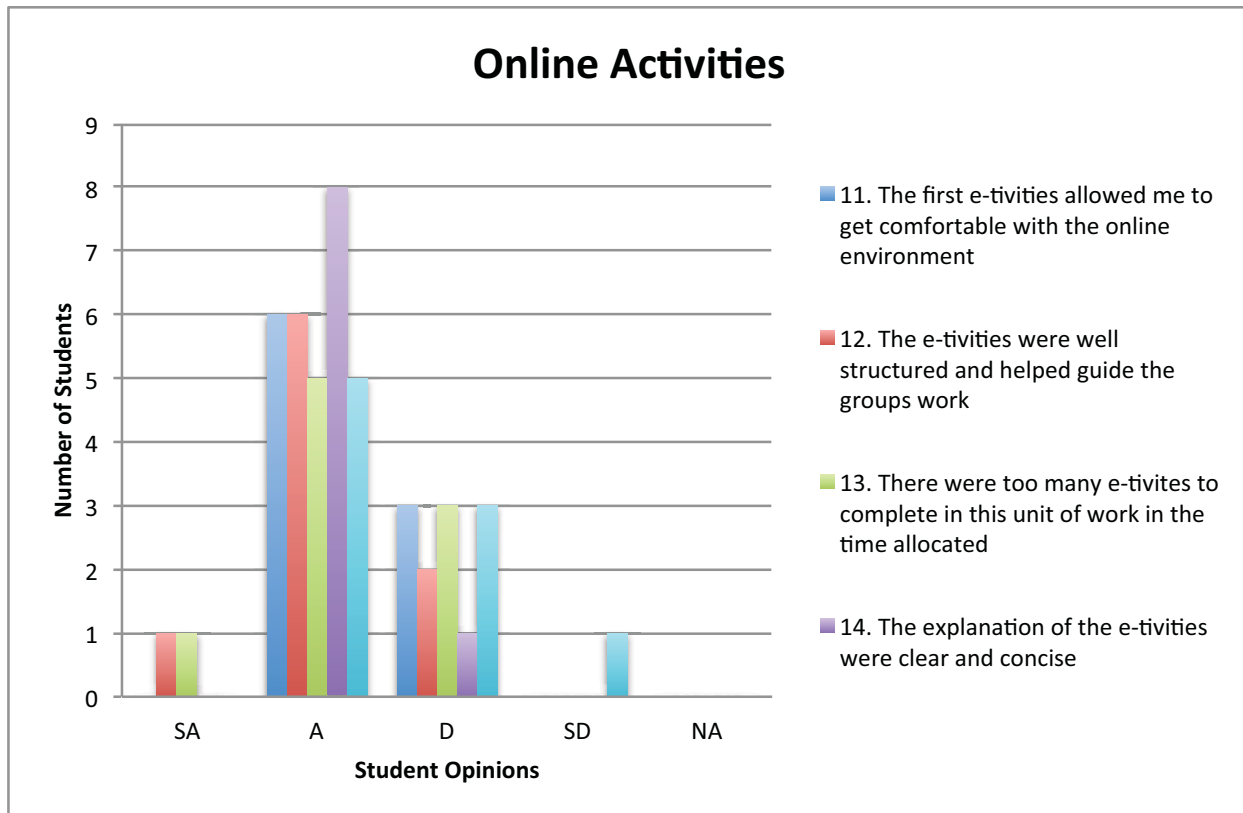


Figure 9: *Student opinions about online activities, QQ11–14*

The responses to QQ11, 12 and 14 suggest that the majority of students found the e-tivities to be accessible and well structured. However they also felt that the time allocated to complete the tasks to their satisfaction was insufficient (see the responses to Q13). Interestingly, in Q15, just over half of the students felt there was enough guidance in time management for the tasks to be completed, but the remainder disagreed. There are two possibilities here: that the online tasks and guidelines were too complex, or that the students did not manage their time well.

Q15 asked the students to comment on the most challenging e-tivity. SS1, 4 and 8 stated Chat, Interview and Wiki were difficult areas while the responses from SS4 and 9 did not answer the question. S6 stated that the group activity demotivated them, and S7 wrote ‘none’ (no online activities) were challenging.

RQ1(c) Results: Art Tasks: QQ17–21

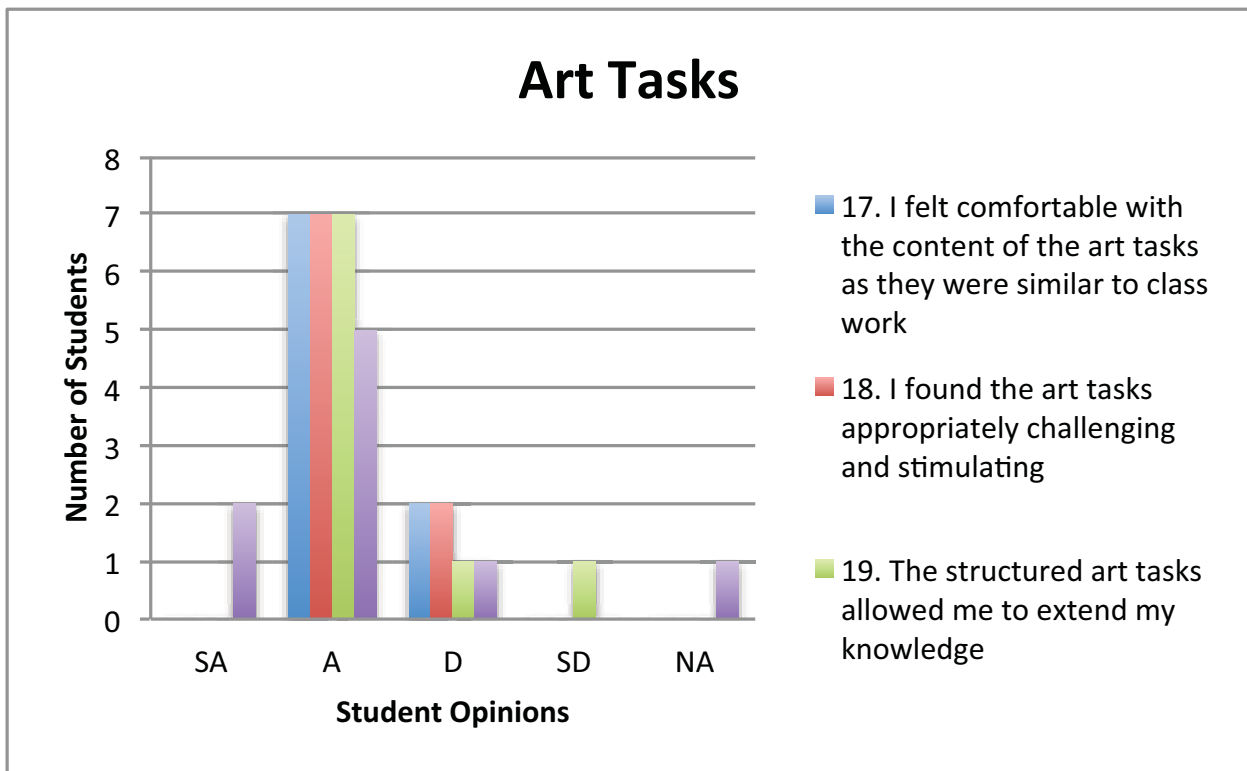


Figure 10: *Student opinions about art tasks, QQ17–19*

Most students agreed that they were comfortable with the art tasks. The tasks were familiar enough to make them accessible and facilitate learning. Q21 asked students whether the art tasks were more or less difficult to complete in the online environment rather than in class. S1 stated ‘more difficult’ as they could not talk to their teacher; S2 stated ‘less’ as they had instant access to tutors; S3 did not answer; and S4 stated that sometimes technical difficulties made it harder. SS5, 7 and 9 provided answers that did not clearly indicate whether the task was more or less difficult. S6 misinterpreted the question. S8 said that it was less difficult, stating that the e-tivities were organised and straight forward.

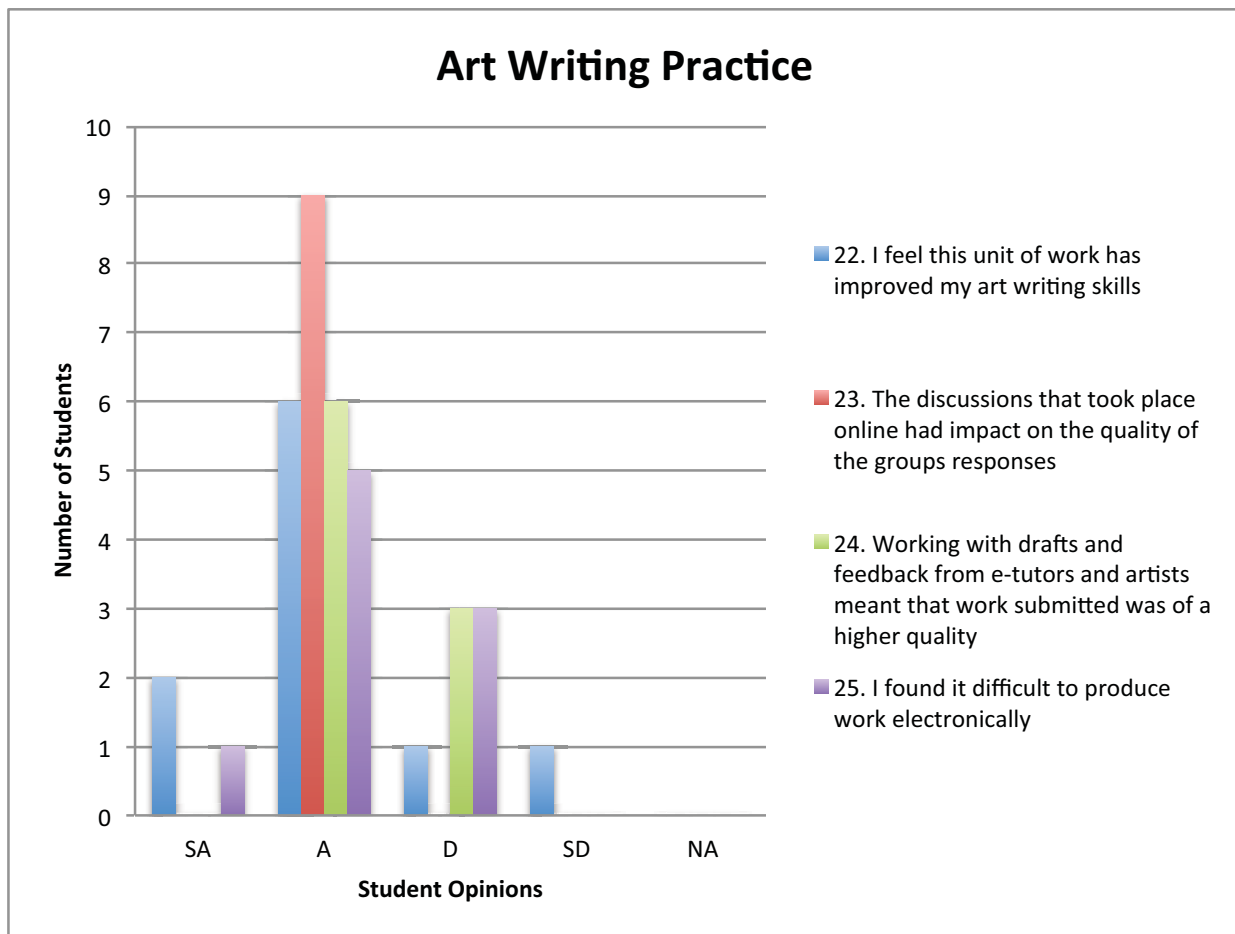


Figure 11: *Student opinions about art writing practice, QQ21–25*

There was unanimous agreement that the online discussion had a positive impact on the quality of the group's responses during the task. Further, it was possible that it was responsible for the majority of participants seeing an improvement in their individual art writing skills. In spite of this, nevertheless, 6 students said they found it difficult to produce work electronically. This could have been a symptom of the school's level of implementation of computer technology at the time of the study.

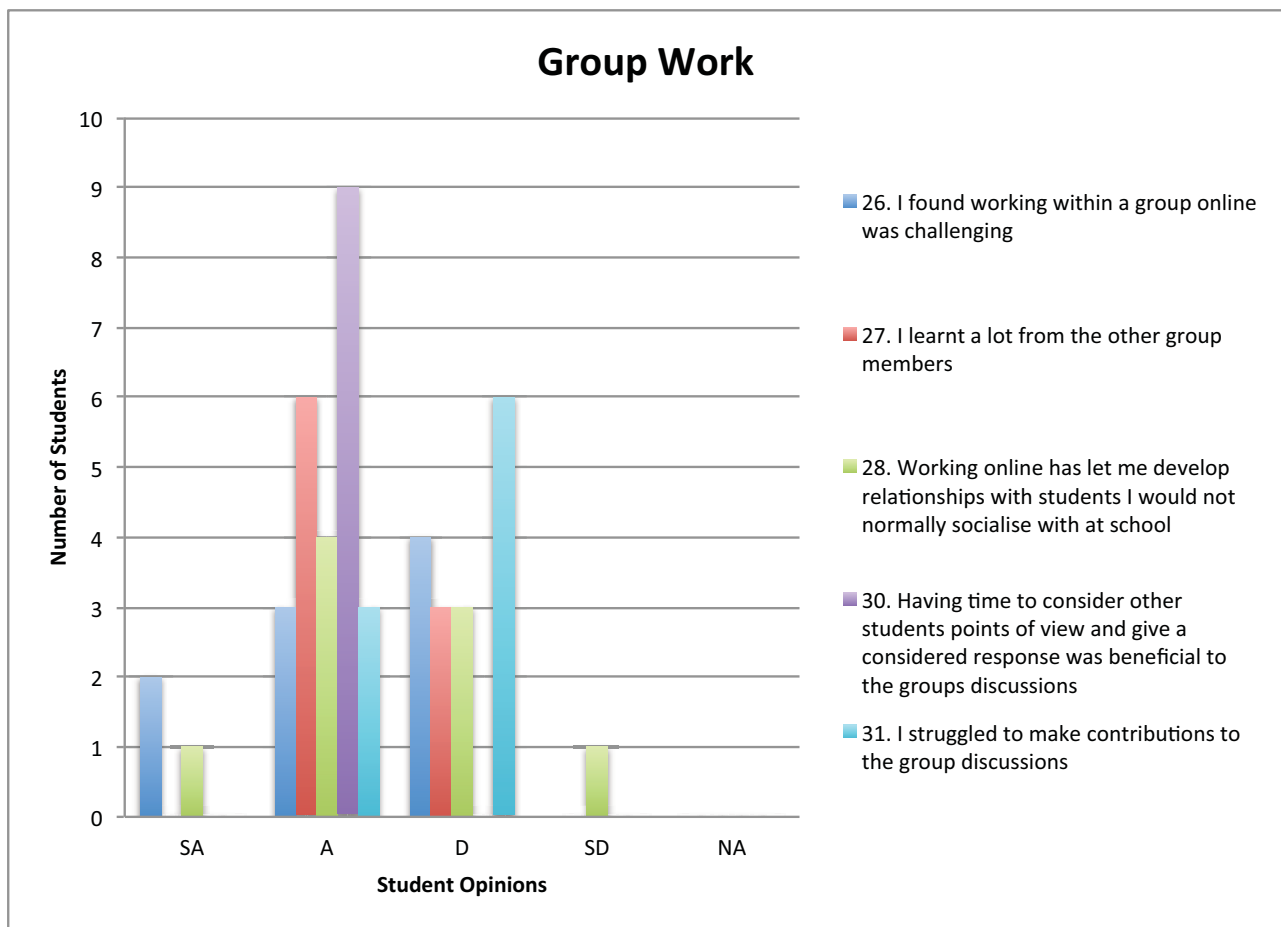


Figure 12: *Student opinions about group work, QQ26–31 (Q29 is not included as there was a technical error in the design of the survey.)*

Just over half the students found that working online was a challenge. A reflection of the novelty of this kind of learning environment, at the school level at that time. While a majority of students felt they learnt something from other group members, they were unanimous in their affirmation of the value of asynchronicity for group discussion. Only 3 of the students found it difficult to make contributions to the group discussion. No firm conclusion can be drawn from this other than a possible lack of comfort working in this environment or difficulties with computer access.

Question 32: *What would have made their group work better?* All 9 students responded to this question. SS1 and 8 identified a bigger class and group, SS2 and 9 referred to more frequent participation and contributions, and S3 referred to organisation. S4 wanted a set time and date for discussions, S5 referred to a more fun webpage, S6 referred to working individually, and S7 stated ‘none’.

RQ1(c) Results: Learning: QQ33–37

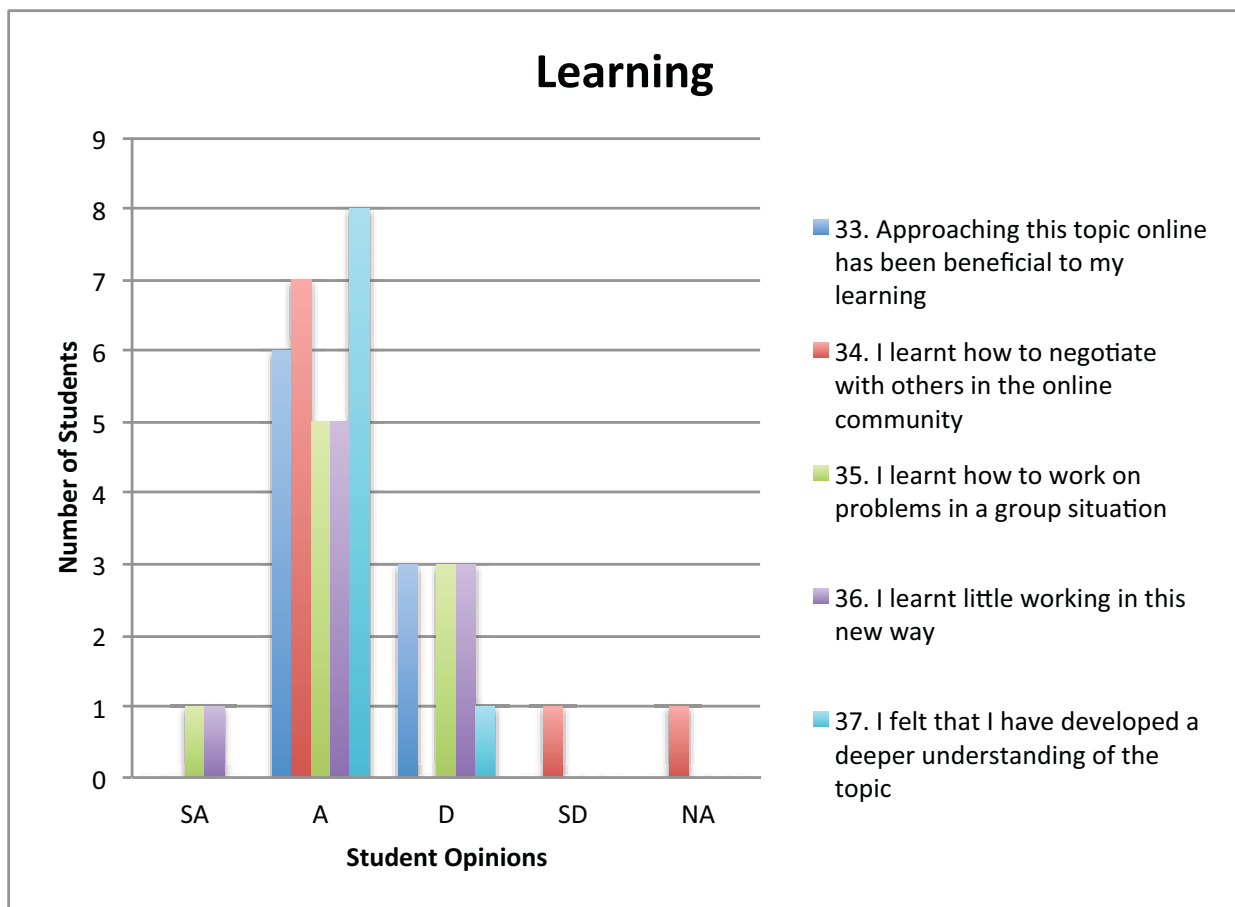


Figure 13: *Student opinions about learning, QQ33–37*

The answers to this group of questions were interesting. The majority of students affirmed the benefits of online learning in this context and they valued the experience of working in a group online. In addition, students stated that they developed a deeper understanding of the topic understudy by approaching it in this manner. Yet the majority agreed that they had learnt little working in this ‘new way’. This contradicts their previous responses but it could be a symptom of

the wording or sequencing of the questions. Some of the contradiction can perhaps be accounted for the results for QQ43. Any blended learning program might benefit from a more reflective follow up feedback 8 weeks after completion of the online component. This would allow for learning and may pick up instances of transformational learning.

RQ1(c) Results: E-Tutor: QQ38–40

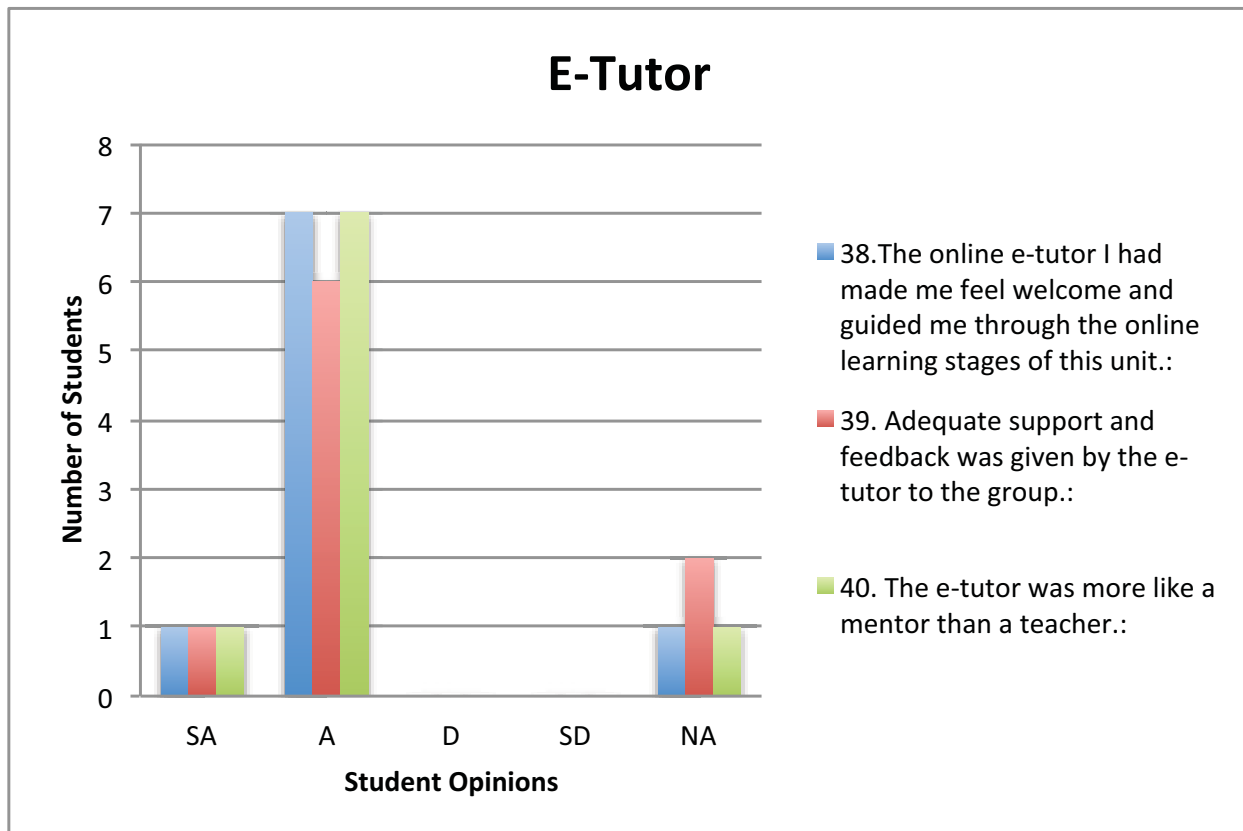


Figure 14: *Student opinions about e-tutor, QQ38–40*

There was an overwhelmingly positive response to the online E-tutor (teacher) in these online tasks. It would have been interesting to have run, a control group who were not given an e-tutor to compare their journey through the online tasks with the mentored groups.

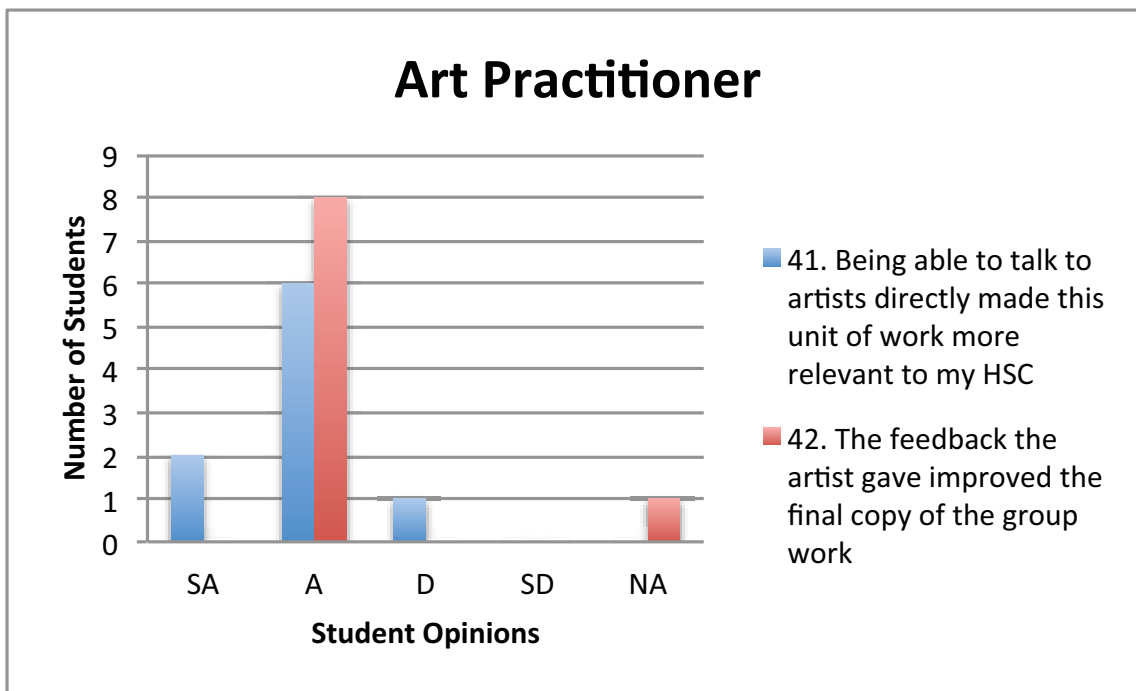


Figure 15: *Student opinions about art practitioner, QQ41–42*

The majority of students agreed that the feedback the artists gave during the discussion improved the final work. The majority of students agreed that being able to communicate with the artists made the work more relevant to their studies. This positive response suggests that accessing the perspective of the artist, as a primary source, reveals information not transparent in the object itself. Student OVSAS1 later *stated* “*Its good to cut through the wifty wafty crap you find in textbooks*”

Responses to Q43: *How do you think the online unit of work can be improved?* Table 15 presents the responses of the 7 students who responded.

Table 15: Responses of Students 1 to 9 to Question 43

RQ1(c)	
Verbatim Excerpts from Student Responses to Question 43	
Student	Response
S1	<i>less tasks and more guessing game kind of things</i>
S4	<i>to discuss more about website</i>
S5	<i>by changing the layout of the program</i>
S6	<i>Take it offline. Have hard copies you MUST hand in to encourage those who are less</i>
S7	<i>the convosations</i>
S8	<i>Outlines a little clearer online rather than with help from the teacher</i>
S9	<i>better describing</i>

S4 may have meant that more training with MOODLE was required. SS5 and 8 referred either to the layout of the interface of MOODLE or to the task descriptions within MOODLE as needing improvement. S9's response was a very brief statement but may also refer to the improvement of task descriptions. SS1 and 7 referred to the interactive nature of the program and working online as areas that need improvement. S6 thought that working offline would improve motivation and participation.

RQ2(a) Results

RQ2 investigated the asynchronous forums completed by 4 students from the Smart Arts Group, 1 artist and the teacher. Analysis of these data was both qualitative and quantitative to highlight best the various aspects of the research question. Data categories emerged from the dialogue, and the interactions between student and artist, student and student, and student and teacher were reported. There were 2 forums with 5 threaded discussions in the Smart Arts Group communication, namely: Task 2: Forum: Who Am I? and Task 4a: Forum: Conceptual Framework

Discussion: Artist/Artwork/Audience/World (4 threads). Table 16 illustrates the number and kinds of posts that were lodged in the discussion threads.

Table 16: *The Number of Posts Lodged in Five Threaded Discussions*

RQ2(a)						
Smart Arts Group Communication Threads						
	Task 2 Thread	Task 4a Threads				Total
	Who am I?	Artist	Artwork	Audience	World	
Artist Posts	8	5	3	6	4	26
Student Posts	13	5	5	6	4	33
Teacher Posts	2	0	0	0	0	2
TOTALS	23	10	8	12	8	61

There was an overall total of 61 posts over 16 days, from Wednesday 14 May 2008, starting at 8.07 am, to Thursday 29 May 2008, finishing at 10.24 pm. The four students posted the largest number of times, with 33 posts, followed by the artist, with 26 posts. The teacher appeared in only one discussion thread and posted only twice. The first discussion thread (Who am I?) had the largest number of posts at 23, followed by Audience (12), Artist (10), and Artwork and World, with 8 posts each. Table 17 illustrates the number and kinds of interactions between the participants.

Table 17: *The Number and Kinds of Interactions between Participants*

RQ2(a)						
Smart Arts Group Communication						
Interaction between:	Task 2	Task 4a Threads				Total
	Who Am I?	Artist	Artwork	Audience	World	
Student & Artist	14	10	6	12	8	50
Student & Student	7	0	2	0	0	9
Student & Teacher	2	0	0	0	0	2
TOTALS	23	10	8	12	8	61

The highest number of student interactions (50) took place with the artist; 9 posts were student to student and 2 posts, were directed by the teacher to the students. The cells shaded in grey in the table will be discussed briefly below.

Student to Artist Communication

The student to artist communication was fairly regular and consistent across all the discussion threads. Typical engagement ranged from question-and-answer type responses to more involved discussions where both students and artist offered opinions, reflections, advice, confessions or debate, while reiteration, clarification, explanation and supportive statements were offered in discussions. These discussions made connections and relationships, provided examples, gave in-depth descriptions and interpretations, and drew conclusions. The discussions began with direct questions to the artist, which started the discussion threads about the artwork, artist, audience and world. The discussions then moved to more in-depth treatment about the artist's practice, the philosophical and conceptual meanings behind the work 'Nothing to hold on to' and the broader aspects of defining: *What is a painting?* and *What is art?* The students often made personal admissions about their working practices; this was an unintended outcome and led to a forum being set up by the researcher to discuss the students' own artworks. This was an emergent aspect of the design of the forums.

Student to Student Communication

Student to student communication occurred in two of the five threaded discussions. The first appeared in the Who am I? discussion. SAS1 expressed disagreement with SAS2, who had made a guess to name the artist in question. The second student to student communication entry followed from SAS4, who agreed and supported SAS1. Further into the discussion, SAS2 entered a plea: '*Agh! She got there before me :(.*' This comment was directed to SAS4, who asked the artist another question. SAS1 inserted an image of Batman and Robin as a response to a joke the artist made earlier in the discussion, but she directed it to SAS2 as an attempt at humour. SAS2 then

demonstrated frustration at not being supported by his group members: *'Everyone's against me. – sits in corner and pouts–'*. The next two student-to-student communication comments (SAS4: *'Yay!!! We rule :)'*; and SAS2: *'Hoorah! :)'*) consolidated the success and happiness of the achievement of those two students who independently arrived at the same artist. These interactions were categorised as agreement/disagreement with each others' investigations and were emotional interactions showing illustration, frustration, humour and happiness.

There were two more student-to-student communications in the Artwork discussion thread. SAS1 told SAS4: *'um in the artist forum Artist2 and my convo is heading into the realms of artwork questions... so yeah the last couple of entries kind of overlap artist and artwork :)'*. SAS2 replied: *'Well, SAS1, the conceptual framework is all about connections. :)'*. This short interaction, while not seeming significant, does demonstrate that the students were thinking about and making meaningful connections across discussion threads, using the syllabus conceptual structures and enacting them in the discussions. This is also an example relevant to RQ2(b) and to how Visual Arts Syllabus processes were enacted through the discussion. This interaction illustrates that students may have a meaningful understanding of the context that they are studying in.

Student to Teacher Communication

The teacher posts appeared as responses 17, 18 and 43 in the Who am I? discussion. The first response gave good positive feedback about the group's ideas and encouraged them to continue the detective work and conclude with a group answer. The teacher also asked where was student SAS3(?), as they had not yet entered the discussion. The teacher's final statement commented on the group's nature being true to its name: *'Wow! Smart Arts you certainly live up to your name!'* The teacher's interactions in the discussion thread were mainly directional or observational and demonstrated positive reinforcement towards the group and their achievement.

Interpretation of the discussion posts

To gain a deeper understanding of the communication that took place, the next section analyses the forums in context and tries to identify the most meaningful understandings that are presented through the discussion threads.

The researcher has elected to report on only those posts and responses that were relevant to RQ2(a). Not all posts were analysed because of the large number or size of responses. Analysis was orientated to highlighting ‘meaningful understanding’ (Sullivan 1993) within the discussion and context. The results are explored below under the headings of ‘Students’ and ‘Artist’.

Task 2: Forum: Who Am I?

This forum was the first interaction the Smart Arts Group had with their artist. It was set up by the researcher as a Who Am I?–type guessing game. The artist was briefed by telephone with the aims and purpose of the forum and the use of MOODLE. The artist began the forum on Wednesday 14 May 2008, 8.07 am, with the first artist post giving a clue: *‘my work is about emptiness ...’* and ended on Wednesday 21 May 2008, 8.16 am, with the teacher giving a final encouraging statement: *‘Wow! Smart Arts you certainly live up to your name!’* During the seven intervening days that this forum was active, there were 23 posts in total: 8 artist posts, 2 teacher posts, 13 student posts (SAS1 x 4 posts, SAS2 x 5 posts, SAS4 x 4 posts. One student, SAS3, did not lodge any posts during this period). As this was an asynchronous forum, the timing of the posts varied, with two days’ non-communication from the start of dialogue and one day’s non-communication over a weekend. This did not seem to have any obvious adverse affects on the dialogue generated, as the group was able to debate successfully and solve the mystery about who their artist was. There was enough online interaction to motivate the students to continue and complete the discussion.

Students

The artist's first post, a clue, gave a philosophical and conceptual background to the meaning of her artwork. One word, '*emptiness*', sparked a meaningful discussion. On the first analysis of the dialogue in the forum, the researcher noted that students proceeded to ask only five questions. These questions immediately resonated as applications of three of the four NSW BOS Syllabus Frames. Table 18 provides an interpretive explanation of how these questions enact the Visual Arts Syllabus.

Table 18: *Interpretation of Student Questions in the Who Am I? Discussion Forum*

RQ2(a) Results		
Student Questions in Who am I? Forum Discussion		
Student/Response	Question	Frame
SAS2/2	<i>Is it your subject matter that is empty, or the process you use? or a bit of both?</i>	SAS2 made meaningful relationships between art terms <i>subject matter</i> and <i>process</i> that refer to the Structural Frame implicitly to investigate what aspects of the work are empty. In his question SAS2 made meaningful connections between the philosophical nature of the work and its structural aspects.
SAS1/4	<i>... does the emptiness also apply to the emotions or on a bigger scale like the WORLD ... and also what is your palette like does it add to the empty?</i>	SAS1 made relationships between the Subjective and Structural Frames at a high level because she connected these to the philosophical expression of emptiness.
SAS4/9	<i>is your work a painting or another type of medium?</i>	SAS4 used a Structural Frame question to define the medium used, the question promoted a more directed discussion.
SAS4/14	<i>Oooooo ... well then if it is not a painting??? Does you[r] work have a cultural aspect?</i>	SAS4 tried to consolidate the reason for the work's not being a painting and asked another question. Attempted to reframe the investigation from a Cultural Frame point of view.

These questions are evidence that the students were operating within the knowledge of the Visual Arts Syllabus as they drew conclusions based on these investigative questions and reached a

consensus about ‘who’ their artist was. Linking these structures to philosophical meaning engaged the students in a higher-level use of these scaffold structures.

Artist

This next section isolates how the artist and SAS2’s communication was meaningful. From the 8 posts the artist made, 3 directly encouraged the students to think about the philosophical meaning and references in her artwork. Table 19 provides the responses and the researcher’s interpretation of these within the context of the dialogue.

Table 19: *Artist’s Responses to Clues about Artwork and Researcher’s Interpretation of Them*

RQ2(a) Results		
Artist’s Answers in Who am I? Forum Discussion		
Response Number	Response	Interpretation
3	<i>SAS2 ... the work IS empty of a specific subject ... the process was also empty, empty of a predefined destination ... so to answer your question, yes a bit of both ... but funnily enough in the end I did make a work, the work IS something ... and not empty at all!! ha</i>	<ul style="list-style-type: none"> • Artist put forward a response that may or may not have clarified the student’s question. • Artist was trying to foster a deeper discussion about the topic, ‘emptiness’.
5	<i>Yes SAS1 ... the emptiness is a big emptiness, a philosophical emptiness, and at the same time it is an intimate personal emptiness ... and on this very intimate level I think the palette that I chose specifically attributed this empty feeling/or sense of ‘empty’ to a particular gender ... hope that helps ...?</i>	<ul style="list-style-type: none"> • Artist responded by clarifying that the emptiness is big, philosophical, intimate and personal, and directly related this to the chosen palette. Introduced the idea of gender. • A deeper and more meaningful understanding of her work was offered in this post.
23	<i>My work doesn’t have a cultural aspect ...</i>	<ul style="list-style-type: none"> • Artist gave a clear No answer to change direction of discussion.
24	<i>The palette is limited (constrained) ... (limited in a way that could make it gender specific ... i.e. a palette for a male or female) ... You could have asked questions like ... ‘is the palette all dark’, or ‘all light’ or ‘is it mostly based on one colour/hue’? or is it pink or blue ...? Is it bold or subtle ...?</i>	<ul style="list-style-type: none"> • Artist offered a summation of the thoughts and investigations in the discussion so far. • Artist redirected the

RQ2(a) Results		
Artist's Answers in Who am I? Forum Discussion		
Response Number	Response	Interpretation
25	<i>Is NOT (primarily) paint, but of other medium ... (and the medium is HIGHLY unusual!!!) ... (I'm handing the answer to someone here!)</i>	discussion to sum up progress so far by giving more meaning to the clues. • Artist returned to the original clue.
26	<i>And is about emptiness ...</i>	

One of the students, SAS2, responded to response 5 with his hypothesis (response 6) about the identity of the artist. He supported it by referring to his investigation of the Redlands Westpac Art Prize (RWAP) website (Appendix 11) and by quoting aspects of the descriptive citation and title of the artwork. Table 20 presents response 6.

Table 20: SAS2 Response 6 and Researcher's Interpretation of It

RQ(2a)		
SAS2 Response to Who am I ? question		
Response no.	Response	Interpretation
6	<i>Hmm. Well I cannot seem to shake a sneaking suspicion that you could very well be Beth Norling, for her 2006 Westpac Art Prize winner 'Nothing to hold onto ...'. I make this hypothesis based on 'empty/receding qualities', 'nothingness of the title' and of course 'Nothing to hold onto ...' is a small, private and feminine world'.</i>	<ul style="list-style-type: none"> • Student put forward a guess as to who the artist might be, making a hypothesis with quotes from the RWAP website. • Student had gathered evidence from the discussion and investigation of the website to make meaningful connections with the clues and discussion, prompting his conclusion.

SAS2 made a meaningful connection in this response. He supported his hypothesis by making conceptual connections to the artist's work through the title '*Nothing to hold on to ...*' and the word '*empty*'. SAS1 entered the discussion with response 7 and disagreed, putting forward the name of another artist and making connections to their work through words such as '*it is very dark*'

and emotional, and it looks really empty, but on the other hand full ... SAS1's response was supported by student SAS4 in response 8, who agreed by connecting her understanding of the clue to the untitled nature of the work, stating ‘*“untitled” does reflect a sense of emptiness both visually and conceptually*’. SAS4 furthered the debate by asking a question about medium (response 9). The discussion then moved in a direction that was not fruitful to the debate and the artist refocused the discussion by cleverly summarising the findings to date in responses 23–26. SAS4 then responded to the artist by guessing her name. SAS4 then proceeded to justify her choice by making meaningful connections to the clues with the RWAP website information. Table 21 presents response 32.

Table 21: SAS4 Response 32 and Researcher's Interpretation of It

RQ(2a)		
SAS4 Response to Who am I? Question		
Response Number	Response	Interpretation
32	<i>She too uses materials such as plasticine, wall-paper, tape, cardboard, tracing paper and oil-paint ... her artwork 'Nothing To Hold On To' encompasses 'empty/receding qualities' and there is a 'feminine mood to the work,' and there is an absence about the work 'that still retains a strong visual and emotional presence'.</i>	<ul style="list-style-type: none"> • Student supported her guess with quotes from the RWAP website. • Indicates that the student had been investigating so that she was able to make meaningful connections between the clues, discussions and the website.

SAS4 came to her conclusion based on the question she had asked about art media. The title here just directed her to the work but she drew connections with ‘*empty/receding qualities*’ and another clue about gender, ‘*feminine mood to the work*’. She continued with the mention of absence and ‘*that still retains a strong visual and emotional presence*’ as her final meaningful connection.

It is important to note that, after this forum, the students were able to engage with this artwork intimately for a period of time in a face-to-face situation. This direct experience was carefully timed after the Who am I? forum to allow the group's members to develop a range of questions for the artist to engage with in the subsequent Conceptual Framework forum and threaded

discussions. This is particularly pertinent, as this artwork has three-dimensional qualities that viewers may be limited in appreciating from photographs alone. Without direct experience of the art object but only the study of a reproduction, students could arrive at a distorted view of the artwork. This practice is also in line with Sullivan's (1993) framework influencing art-based art education – making connections.

Task 4a Forum: Conceptual Framework (CF)

This forum took on the role of allowing the students to engage in discussions with the CF and the artist. It began on Friday 23 May 2008 with all group participants posting questions at various times and was completed by the artist on Thursday 29 May at 10.24 pm. This forum lasted for seven days and there was a total of 38 posts: 18 by the artist and 20 by the students (SAS1 x 5 posts, SAS2 x 5 posts, SAS3 x 6 posts, SAS4 x 4 posts). As the forum was started on a Friday, there were two initial days' non-communication over a weekend. Tuesday 27 May also had no posts added to the artwork thread and on Wednesday 28 May there were no posts in three of the threads, namely, Artist, Audience and World. Communication during this forum was conducted on most days and the missed days did not seem to affect the natural flow of the discussion. There were no teacher posts during this period.

To isolate the communication that demonstrated authentic engagement through a sense of connection (Sullivan, 1993), the posts in the discussion threads were categorised as follows:

- (1) makes connections and/or sees relationships
- (2) gives in-depth descriptions
- (3) makes an interpretation
- (4) draws conclusions.

Table 22: outlines the amount of this type of communication across the four threads.

Table 22: *Summary of Responses in Discussion Threads according to Theme Categories*

RQ(2a) Results					
Conceptual Framework Forum Responses					
Theme Category	Artist	Artwork	Audience	World	Total
Makes connections and/or sees	12	10	3	5	30
Gives in-depth descriptions	2	0	3	1	6
Makes an interpretation	1	0	1	0	2
Draws conclusions	1	1	0	0	2
Total Responses					40

In total there were 40 responses across the four categories. Three-quarters of the responses indicated that participants were making connections within the discussions; this was the largest theme category. The Artist and Artwork threads produced a higher proportion of connections-type responses, followed by the World thread and, lastly, the Audience. The in-depth descriptions were offered only by the artist and two students (SAS1 and SAS2), who, made interpretations while engaged in the discussion. Lastly, one student (SAS1) and the artist drew conclusions in the discussions.

To enable a deeper understanding of the responses in the themed categories the following section will expand the content of the responses using the theme categories as headings.

Makes connections and/or sees relationships:

This theme sums up the largest number of responses. The artist presented 20 responses that made a connection; most of these explored the artist-artwork relationship or artwork-meaning relationship. Whereas, the students made only ten responses, (SAS1 x 4 responses, SAS2 x 3 responses, SAS3 x 0 responses, SAS4 x 3 responses). Three questions developed the artist-artwork

and artist-audience discussions. There were four statements where two students made connections with the artwork, connecting meaning to the material and the scale of the artwork.

Interestingly, while there were four discussion threads with different aims, the main connection that was being made across all discussions concerned the artist-artwork relationship. This seemed to be the area with the strongest connections being made by the artist, and these, in turn, were possibly being understood by the students. Table 23 is a breakdown of the type of connections being made from the 30 responses.

Table 23: *Summary of Responses Categorised as ‘Makes Connections and/or Sees Relationships’*

RQ2 (a) Results	
Makes connections and/or sees relationships	
Type of connection	Total
Artist-Artwork	12
Artwork-Meaning	6
Artist-World	1
Art Practice	3
Material Practice	4
Student-related connections	4
TOTAL	30

Gives In-depth Descriptions:

The artist made all five in-depth descriptions during this discussion period. Interestingly, there were no in-depth descriptions in the artwork thread, where one would think it logical to have such a discussion. This might indicate that the flow of discussion was natural and not always guided by the predesigned tasks set by the researcher. A recommendation here might be to allow students to start their own discussion threads. The response number coding in Table 24 below names the

discussion thread then the response number. Artist discussion response 49 thus is coded ARTIST 49.

Table 24: *Artist's In-Depth Descriptions and Researcher's Interpretations*

RQ2(a) Results		
Artist's In-depth Responses		
Response No.	In-Depth Description	Interpretation
ARTIST 49	<i>it was empty of things ... but not empty of feeling or meaning ...</i>	Artist clarified again the connection between the artwork's subject and its conceptual meaning.
ARTIST 51	<i>I think I try not to 'think up' a subject ... but let one emerge ...</i>	Here the artist demonstrated how she had arrived at the subject of her work.
AUDIENCE 4	<i>as if it was a secret drawer had been opened to reveal something very personal ... almost too personal ...</i>	Artist provided a simile of a drawer for the artwork's conceptual understanding and continued to open up its personal connection.
AUDIENCE 45	<i>their [meaning the audience's] perception, their history, their interests ... all of this is reflected onto the work ... the work at best a mirror, a place/forum for discussion ...</i>	Artist referred to audiences as having understanding from their experiences; used a metaphor to place the work at the beginning of a dialogue with that audience.
AUDIENCE 46	<i>I can to a certain degree start the discussion ... set up a question ... but really it doesn't matter ... the more open ended the better ...</i>	Artist described the artwork's role and provided a metaphor of an open-ended discussion as a vehicle for engaging with meaning.
WORLD 60	<i>it['s] just that i made a decision/set myself the challenge to make work that expresses fragility, beauty, vulnerability ... kindness</i>	Artist highlighted her personal intention when creating artworks, describing what sort of content interests her.

The artist used in-depth descriptions to clarify for the students how she came to complete a work about 'emptiness'. She used a simile and metaphors within the descriptions to illustrate conceptual/personal understandings and feelings about the artwork. These responses further

developed the descriptions given in the first forum. These too may have developed a richer and more sophisticated understanding of the artwork for the students.

Makes an Interpretation:

There were two responses that made interpretations, both made by students in communication with the artist. Response ARTIST 45 by SAS1 reflected upon the artist's discussion about the subject and related meaning in her artwork. SAS1 gave an interpretation about the significance of the emptiness of the subject matter to the artist by stating *'to you the empt[y]ness was something of great importance'*.

The second interpretation was made by SAS2 in response AUDIENCE 16. At this point the discussion about how the audience had related to the artist's work had been established. The artist reflected on the size of the work and stated that she did not think a work like that could win a prize. SAS2 responded with his interpretation: *'Well, it seems that it was a case of mysterious content that surpassed the daunting sizes of other works!'* In this statement he made a judgement that the conceptual strength in the work surpassed the other large-scale works to win the prize.

Draws Conclusions:

In the discussion threads there were two responses that drew conclusions. The first was by a student (SAS1) in response ARTIST 46. The student had been reading the artist's responses about the meaning in her work. She drew a conclusion: *'so then really to you its not empty of meaning but empty of visual'*. In this statement the student concluded that there was a paradox in the artwork.

The second response to draw a conclusion, ARTWORK 27, was by the artist. She had been discussing her traditional training as a constraint in her artmaking practice and how she has aimed to undo this by the technique of using her left hand. By reflecting in this discussion she came to a conclusion that, by doing this, she had been challenging her own artmaking traditions *'so the traditions I am challenging are primarily my own'*.

RQ2(b) Results

How are Visual Arts Syllabus processes enacted within online learning and specific Visual Arts tasks?

In the current study the definition of ‘processes’ has emerged from the literature and data to be understood as:

- (1) the enactment of the Visual Arts Curriculum (Freedman, 2003)
- (2) the artist giving advice to students (emergent from data)

The students demonstrated and enacted the curriculum mainly through the process of asking questions within the discussions. A review of Table 16 data from RQ2(a) was the first point at which the researcher identified this connection in the first forum. With further review of the CF forum, the discussion with the artist also identified that there were instances where the artist gave advice to students. Data was drawn from only the CF forum for RQ2(b).

The Enactment of the Visual Arts Curriculum

During the four discussion threads, there were 29 questions asked by students (SAS1 x 6, SAS2 x 3, SAS3 x 17, SAS4 x 3). There was one instance of interaction directly related to the questions within the threads. This was discussed under student-student communication earlier in the results and will not be discussed here again.

To identify if there were any patterns of syllabus use or enactment, the researcher isolated the students’ questions and interpreted them using the syllabus structures as points of reference.

There were nine questions that dealt directly with the subjective nature of the artwork and of audience responses to it. There were eight questions that engaged the Structural Frame to uncover the use of non-art materials, the work’s scale, and the symbolic nature of the work. While there were only two questions engaging the Cultural Frame, discussion was conducted on a philosophical level about links with Buddhism and is related to the nature of symbolism that is absent from the

work. There were two questions that pursued discussion around the Postmodern Frame. There was a valuable discussion about the fact that this artwork in the art prize context challenges the notions of painting and possibly the conventions of art. There were five questions that directed the discussion to the artist's practice, questioning methods and techniques used in developing the work. The final eight questions were connected to the syllabus through the CF and the artist's practice. There were four questions asked about audience responses to the work and whether the artist planned her work with a response in mind, and finally there were four questions about the artist's practice and her unusual method of using her left hand to complete intimate aspects of the work.

The questions also clearly revealed a close connection to the activities that the students were asked to undertake. The CF was the guiding structure used in the discussion threads. This was designed by the researcher to guide the students in the construction of their questions so that they kept to the focus of each discussion thread. Table 25 demonstrates how the questions were categorised as enacting the relationships within the CF.

Table 25: *The Ways that the Students' Questions Engaged Aspects of the Conceptual Framework*

RQ2(b) Results	
Student Questions/Conceptual Framework Relationships	
Artist	3
Artwork	3
Artist-Artwork	13
Artist-Audience	3
Artwork-Audience	3
Artwork-World	2
Artist-World	2
Total	29

Whilst there were four clear discussion threads, the questioning and discussion moved across the CF as two points developed. An example of this was in ARTIST 17 and 18 responses by SAS1: *‘So do you think that if this personal situation wouldn’t have happened you would’ve still gone ahead with this work, or even if the work (if you still did it) would’ve had the same impact to yourself, and even the audience?’* SAS1 was clearly making connections between the artist, artwork, and audience in these questions. Another example was in responses AUDIENCE 34, 35 and 36 by SAS3: *‘What a[n] interesting way to use symbols and things, what made you think of that? Were there any influences culturally that made you incorporate that idea of symbolism, or do you just like the whole thought of making the viewer interact with your art?’* This student pursued the artist-artwork-world-audience relationship in these questions, effectively using all of the CF elements within three related questions.

The Artist Giving Advice to Students

An emergent process that arose through the discussions was that the artist gave advice to the students in two discussions. The first appeared in the ARTIST thread starting at response 30 where she was talking about the need to have integrity within artworks. Table 26 gives a transcript of the artist giving advice in the ARTIST discussion thread.

Table 26: Artist's Input Demonstrating Advice Given to Students in ARTIST Discussion Thread

RQ2(b) Results	
Artist Advice 1	
ARTIST 30	<i>I think art needs to have integrity ... and integrity starts with 'subject'.</i>
ARTIST 31	<i>Does your subject really resonate with you ...</i>
ARTIST 32	<i>or did you pick it to be clever or topical or because you couldn't think of anything better? ...</i>
ARTIST 33	<i>quite often we chicken out on saying what we really want to say and end up saying what we think we should say ...</i>
ARTIST 34	<i>don't try to be clever ...</i>
ARTIST 35	<i>don't worry about your audience ...</i>
ARTIST 36	<i>I am convinced that if you are brave enough to be honest in your work (and this means being honest with yourself FIRST)</i>

The second occasion of advice being given came following SAS2's asking for advice after a discussion about size in artworks and how this might contribute to the meaning of works. SAS2 started AUDIENCE 17 thus: *'My artwork which I am thinking of doing contains small, intimate pieces of work'*. AUDIENCE 18 began with *'Do you have any words of wisdom, or did you come to an epiphany regarding your work and its size?'* The artist responded by giving pros and cons in relation to the size of artworks, then she gave very detailed advice on the processes that the student should think about and engage with to decide on that aspect of his works. Table 27 is a transcript of the artist's advice in the AUDIENCE discussion thread.

Table 27: *Artist's Advice in the AUDIENCE Discussion Thread*

RQ2(b)	
Artist's Advice 2	
AUDIENCE 23	<i>If you are making a series of small works ... really think in terms of the whole piece and the size of that.</i>
AUDIENCE 24	<i>lay it out in the sequence in which you intend it to be viewed and look at the whole thing (as an illustrator I do this with picture book illustrations even though they are viewed sequentially) ...</i>
AUDIENCE 25	<i>there needs to be 'rests' in the work.</i>
AUDIENCE 26	<i>moments of sparseness ... and moments of detail, areas of distinct colour</i>
AUDIENCE 27	<i>(assuming you are working with colour, and if not, think in terms of blocks of tone contrasted with areas of line ...)</i>
AUDIENCE 28	<i>A great artist to look at is a guy called [Artist's first and last names] (represented by [Name] Gallery) ... his works are small, but they are so arresting ... great imagery ... odd and beautiful colour ... and somewhat narrative (which may interest you/ and be appropriate to your project) ...</i>

These excerpts illustrate how interaction and discussion with an art practitioner can provide unexpected avenues for engagement with students about art and artmaking practice. This was a valuable though unintended outcome.

RQ3 Results

What kind and quality of student products are developed through the online learning environment?

RQ3 investigated the last thread in Task 4a: Conceptual Framework Forum completed by the Smart Arts Group. The CF Doco thread (so called by the student) was started by SAS1. There was a total of 9 posts over 22 days – from Monday 2 June 2008, starting at 6.03 pm, to Tuesday 24 June 2008, finishing at 9.19 pm.

The four students lodged seven posts and the researcher lodged two in the role of site administrator. The latter were necessary as there was a technical problem concerning the size of documents that could be attached to the discussion thread, and the Conceptual Framework template (Appendix 5) would not post. This thread also showed the longest time lags between posts. There was a two-day time lag between posts 1 and 2, a weekend time lag between posts 6 and 7, and a thirteen-day time lag between posts 7 and 8. This last time lag was due to technical problems experienced by the students when downloading and posting documents using different versions of Microsoft Word. The researcher's suggestion was to save the document as .rtf (rich text format). This worked for 3 students but SAS1 had the most difficulty working with the file as she had Windows Vista. These technological issues are likely to have adversely affected the outcome of the discussion and the possibilities for successful product creation. Providing standardised versions of software to all class members would prevent this problem.

Discussion Thread Interaction

SAS4 was the first to successfully attach a Conceptual Framework template after the researcher changed the forum upload size. SAS4 took the lead to direct the other group members to make a start on the document: *'It would probably be easiest if we each filled in the original components of the conceptual framework ... re-read, summerise [sic] the conversations with Artist1 and fill in the template ...'* SAS3 confirmed this statement and said: *'Yeah that sounds really good'*,

but went further to question how the linkages in the Conceptual Framework could be resolved. SAS3 suggested: *'... should we all try and find some time one art class where we can just discuss them and write them in? As it will probably be less complicated than each one of us having to individually go through the conversations we've each had and then fill in the links.'* No one replied to this post and the following day SAS3 uploaded her additions to the document. The next three posts, by SAS2, SAS1 and SAS4, had no interaction, but rather supported uploaded documents with statements such as *'Here's my bit'*, *'FINALLY! I got it to work ...'* The last post by SAS4, *'I added a link...'*, indicated that the discussion was not completed. There should probably have been more additions to the document.

The Conceptual Framework Document

There were five uploads of the Conceptual Framework document. SAS1, SAS2 and SAS3 uploaded once and SAS4 uploaded twice. Each student at the start of the online learning program chose a colour to write in. This colour coding was to enable the researcher to track students' additions to the document and to see if there were any revisions of the document or evidence of knowledge construction. This was not investigated due to the MOODLE server being decommissioned by the IT Department before the researcher could successfully download all the files necessary to investigate this research question. The researcher did however attempt to locate documents through the students. However with the nature of this study, students had already completed their HSC and moved on so were not able to contribute a saved sample of work. Although technical issues with the server and time limits hampered the completion of the work, the activities constructed around Salmon's Stages 4 and 5 have not been discussed here. However, one group (Smart Arts) did undertake construction of an artist's Wiki (knowledge construction), which remained unfinished on conclusion of the allotted program time.

Quality

This area could not be investigated or reported on in the results, as there was no sample to evaluate.

Interaction

Interaction in this thread was limited to basic posts concerning direction or the uploading of the document. The technical problems experienced with the uploading of, and access to, files may have adversely affected the flow of dialogue and the motivation of students to complete this forum more fully and to a higher level of interaction. As there was no work sample produced, it is not possible to provide any evaluation of it.

Summary of Findings

This section provides a summary of the findings arrived at in this chapter. It is presented using the first and second levels of triangulation in the methodology. The subheadings of Perceptions, Processes, and Products will be used to focus on the relevance of each research question.

RQ1: Perceptions:

Online Learning: Students' perceptions of online learning before they began the online program of work indicated that online learning was not a common pedagogy in the school setting and that it was possible that students were not aware that they had engaged in previous online activities and had failed to identify that they had been online learning. It was clear from the student online reflections that they valued the opportunity to work online with an art practitioner. There were also statements of sustained satisfaction about the online environment. Interestingly, there was a decrease in the negative comments from the first reflection period to the second. This could mean students became more comfortable with their online experiences. The feedback questionnaire indicated that the majority of students understood the expectations of the unit and found the online activities accessible and well structured. However students felt that the time allocated was

insufficient for them to complete their allocated tasks, and there was a comment about the descriptions of the online tasks needing more clarity. Most students did agree though that they were comfortable with transferring the class art tasks to the online environment.

Group Work: It was evident from the pre-online responses that all the students had previous experience in some kind of group. Four of the students referred to other online experiences, identifying the MOODLE platform, and forums as examples. The participants also demonstrated that they valued group work and expected it to be part of their learning experiences in the school setting. The negatives associated with group work were typical of members of any group and were not peculiar to a group engaged in an online learning experience. The reflection statements about group work while working online demonstrated that students were very aware of the group function and that they had identified strengths/achievements and weaknesses in group work. Being able to reflect on the function of the group rather than just the outcome of the task made this reflection question a positive one for the students. At the end of the program students were asked to rate their group work online. Responses indicated that students felt that they had learnt from others in the group, and they were unanimous in their affirmation of the value of asynchronicity in relation to group discussion. Students also responded positively to the benefits of online group work, which they believed developed a deeper understanding of the topic. However there was a contradiction in the results here with students also stating that they had learnt little working in this 'new way'. This could be a symptom of the questions asked or of the language used by the researcher.

Art Writing Practice: In the Pre-Online Questionnaire, students' responses did not indicate that they had a clear understanding of art writing practice as a text type. The focus of their responses was difficulties with language structures, ways of thinking, key words, and unpacking examination questions. These characteristics are not confined to Visual Arts writing and could be related to any subject in the HSC. Students offered no reflections while online as they did not complete this reflection period. Results in the Post-Online Feedback Questionnaire indicated unanimous

agreement that online discussion had a positive impact on the quality of group responses during the task and was possibly responsible for the majority of participants seeing an improvement in their individual art writing skills. The students also agreed that communicating with the artist made the work more relevant to their studies.

RQ2: Processes: The interaction that took place broadly investigated the amount and kind of communication that was represented in the selected group forums. The researcher then isolated the need to explore ‘meaningful understanding’ and the enactment of the Visual Arts Syllabus structures as the main focus of inquiry. Early on, students demonstrated that they were operating within the knowledge of the Visual Arts Syllabus in particular engagement with the Frames. Questions formulated to arrive at a consensus about ‘who’ their artist was clearly indicated this. Students further demonstrated that they were able to link these structures to philosophical meaning. This demonstrated that they were using these structures at a high level. Further investigation of the next forum identified that three-quarters of student responses were making connections within discussions while exploring the artist-artwork relationship. This seemed to be the area with the strongest connections, being made by the artist. The artist-artwork relationship, in turn, was being understood by the students. The artist’s use of in-depth descriptions in the discussion threads may have developed a richer and more sophisticated understanding of the artwork for the students. Interpretation of the meaning of the artwork by students was presented in two responses. This demonstrated the significance of the notion of *emptiness* and the conceptual strength of the artwork. There were also two responses that drew conclusions. The first response – by a student – was significant as it concluded that there was a paradox in the meaning of the artwork. The second response – by the artist – revealed that the artist was challenging her own artmaking traditions. This evidence indicates that students and the artist were operating in the discussion to gain meaning and a sense of connection to the artwork and to artmaking practice.

Processes were further investigated as the enactment of the Visual Arts Curriculum. Results indicate that the students used 29 questions in an appropriate manner to develop discussions using the Conceptual Framework scaffold as a guide. The discussion and questions moved across the four discussion threads. There were two significant examples that demonstrated that students were enacting the syllabus and making connections in relation to artist-artwork-audience-world relationships. This section of the results provides salient examples that illustrate the notions of art educationalists, Graham Sullivan and Kerry Freedman.

RQ3: Products: The challenge of technological compatibility and document upload size hampered the progress of this discussion thread. Interaction was adversely affected by three time lags in the asynchronous discussion. Even though all students posted contributions there was only one interactive post in this discussion and the discussion did not have a conclusion or a completion element to it. It is not possible to summarise any results from the work sample due to the loss of data resulting technical difficulties beyond the researcher's control.

Conclusion

RQ1 results demonstrated student misconceptions about online learning yet also established that most students valued online learning and the experience of working online. While RQ3 results confirmed negative effects of time lags in asynchronous discussion, RQ2 results effectively isolated interactions in discussions that encapsulate the theoretical underpinnings of this study.

The researcher is aware that the reliability of these results is limited by the small sample and the results are not intended to be generalised or transferable. These results are relevant to this case and school setting. However the formative evaluation of the online program does enable the making of recommendations to the school, the development of the Visual Arts Program and, possibly, the devising and conducting of further research in art education. The next chapter will put forth six preliminary conclusions, and provide recommendations about the uses of the theoretical devices and models, and the limitations, results and the further refinement of the study.

CHAPTER 5 – CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter sets out the relevance of the theories used in the current study, the application of theory in art education, the appropriateness of the research design, preliminary conclusions from the summary of results, recommendations from the study, concluding remarks, and suggestions and implications for continuing research.

The Relevance of Theories Used in the Study

Vygotsky's theoretical relevance was positioned in this study in two ways: the first, by interpreting his concepts of the ZPD, instruction, mediation, internalisation and transformation, and the second, by engaging three aspects of his theory to organise the threefold research framework of the current study. Vygotsky integrated educational and psychological perspectives in a sociocultural environment. He advocated the importance of the role of formal schooling and instruction. This social context for learning has a powerful relationship with teaching, instruction and cognitive development. The use of Vygotsky's work in the current research framework was relevant as he positioned language or mediation centrally in development. It is through socially mediated interactions with others that students may learn. Symbolic tool use of speech and language gave formation to this type of interaction and was the catalyst for developmental transformations. This process has been defined by recent multiple expansions of the ZPD. The enactment of the ZPD experience provides opportunity for apprenticeship, scaffolding, leading activities and assisted performances. Contemporary researchers such as Kouzlin and Efland have expanded examples of symbolic tool use to include scaffolds (in this study: Frames, and the Conceptual Framework) and artworks. Internalisation and transformation of these tools are attained through mediated social exchanges and individual reflections. Vygotsky's theories were relevant, because today's sociocultural environments include traditional technological advancements in communication as

well as contemporary ones. Individuals are exposed to a blend of social communicative experiences both face-to-face and online. Teaching and learning frameworks such as those designed by Salmon and Sullivan are examples that demonstrate shared, situated and distributed social learning experiences. In Visual Arts Education this is pertinent as meaning making becomes the central premise for all learning interactions. Vygotsky's theory is relevant to contemporary research and thinking as he exploited the sociocultural environment and the position of learning within a social experience. This resonates with the current study's design and outcomes.

The Application of Theory to Visual Art Education

The application of theory in this study focused on firstly, designing the Visual Arts unit of work to allow students to engage in a blended approach to learning using a social scaffold (Salmon's Five Stage Model) for the online component, and secondly, to apply the art theories of Sullivan and Freedman. The second application was evidenced in the analysis of the study data demonstrating examples of the theories in the asynchronous dialogue between the artist and students of the Smart Arts Group.

The online component of the blended unit of work was designed to reflect Salmon's Five-Stage Model, while also being consistent with the New South Wales Board of Studies Visual Arts Stage 6 Syllabus. The Smart Arts Group successfully worked through the first three stages of the model: access and motivation, online socialisation and information exchange. The group had begun to access stage four, knowledge construction, through the construction of a WIKI but were not able to complete this stage due to time limitations. The online interactivity of this group was consistent with regular postings and increased as the group progressed through the stages.

The group's asynchronous dialogue with the artist was in-depth and clearly demonstrated examples of Sullivan's theory to include themes such as (1) makes connections and/or sees relationships, (2) gives in-depth descriptions, (3) makes interpretations and (4) draws conclusions. Of these four themes the most compelling was the amount of dialogue that made connections within

the discussions. The artist/artwork relationship was the site for the strongest connections that demonstrated a Sullivan's theory of sense of connection and meaning making. While the other three components were present there was less occurrence of these themes in the discussions.

The in-depth descriptions located in the dialogue exchanges were mainly developed by the artist discussion, where she used a metaphor and a simile to help explain and uncover the meaning of '*emptiness*' in her work. These in-depth descriptions offered the students the opportunity to access a greater depth of understanding about why the artist made the work.

There were only four interpretations and conclusions that were made by students and the artist. These responses were isolated as significant in demonstrating instances of Sullivan's theory. The first student interpreted the notion of emptiness and offered the first conclusion about the relevance of the notion of emptiness in the artwork. The second interpretation offered explanation about the nature of the work's mysterious meaning and related it to the artwork's size. The last, conclusion, was made by the artist herself, where she came to a realisation about challenging her own artmaking practice.

Freedman's concept of mediation was applied to see if the application of the Visual Arts Curriculum was present in the asynchronous dialogue. This was evidenced in the study through the questions students asked the artist. The questions were clearly engaging the Frames and were crossing over the Conceptual Framework structure in the discussions. This is significant as it demonstrates that the students were mediating their understanding of these structures at a high level.

While the researcher engaged in further data analysis an emergent application of Freedman's concept became apparent as the artist sought to give advice to the students. This type of mediated interaction provided an unexpected avenue of engagement, where students discussed their own artworks and artmaking practices with the artist.

The Appropriateness of Research Design

This study's research design was guided by Graham's activity level blended approach to learning and a research model design that brought together the online work of Salmon and of Ryba, Selby and Mentis. The appropriate application of Salmon's model was useful in this study as the arrangement of the online learning activities within MOODLE was structured within the five stages of the learning model. This afforded the participants an opportunity for sequential and gradual exposure to the demands of learning online. The activity level blended approach to learning, a combination of face-to-face experiences, and online learning activities and discussions were relevant and useful at a secondary-school level because they gave structure and confidence to the participants but they also gave opportunities for students to engage with primary resources such as the art prize and related artwork.

Equally the appropriate application of key aspects of Ryba et al.'s Triple P Framework directed the formative evaluation and triangulation of the research questions and data instruments in the study. The broad areas evaluated were student perceptions, interactive processes, and possible products. The dual application of the online learning model and the analytical framework were relevant in this research design, as it confirmed, the validity and credibility of the emergent research results. The use of member checking was also completed with research participants to ensure accurate interpretation of the qualitative data.

Summary of Research Findings

An in-depth summary of results is presented at the end of the previous chapter. This summary offers an overall statement about each research question.

RQ1: Social Context for Learning

(a) What are initial student perceptions of online learning, interaction, group work and the practice of art writing?

Student pre-online perceptions demonstrated misconceptions in their understanding of the new style of learning even if they had participated in online learning previously as some of the participants had prior exposure to MOODLE. This demonstrated that online learning was not a common pedagogy in the school setting and students had a lack of familiarity with the term and concept. Student online interactions pre-online were described by students as social experiences to include: chat rooms, forums and email. All students indicated that they had participated in-group work, either in the school setting, work setting, or through previous MOODLE experiences. Students were able to identify the positive and negative aspects of group interaction and highlighted the challenges to include the division of labour, motivation and individual opinions. Benefits included interaction with others as an avenue for personal improvement. Perceptions about art writing were not significant and demonstrated that students did not see it as a specific text type. This could be due to the curriculum structure where art writing at the school level is connected to examinations. Much of the responses given to this section of the questionnaire demonstrated that results were not Visual Arts subject specific and could be related to any school subject.

(b) How do students perceive their experiences in using technology for group work, online learning and the practices of art writing?

The use of student reflection periods while working online was a very powerful tool as it allowed students to have a voice about their learning. Group responses indicated that students were very aware of the function of the group online and were able to identify weakness and achievement within the group. This is a positive outcome as students were not just task orientated but saw the value of the group experience in the online context. Students also demonstrated that they valued the interaction with the art practitioner. Students believed this primary contact made accessing the accuracy of information important in learning about the artist. General responses were very positive and indicated a sustained satisfaction with the online environment and the environment's ability to create opportunities for real-world interactions. The perceptions about students' art writing could not be analysed as this period of reflection was not completed by the students. From the results it

can be said that the majority of students have a positive response to the use of technology while engaging in group work and online interactions with an art practitioner.

(c) Do student perceptions change as they engage in the unit of work?

It can be deduced from the results that student perceptions did change from their initial misconceptions about online learning. This can be directly related to their ability to engage and reflect on their learning. There were statements of sustained satisfaction about the online environment and a decrease of negative comments as the students progressed in the unit of work. This could also reflect the students' growth in comfort with the online experience.

RQ2: Socially Mediated Communication

(a) What kind of communication in an asynchronous online learning environment promotes meaningful understanding in a Visual Arts Education context?

There was a large range of communication in the asynchronous forums investigated by this research question. The most significant communication was between the student and artist. Typical engagement ranged from question answer type responses to more involved discussions where opinions, reflections, advice and confessions featured in the posts. The responses reiterated, clarified, explained, provided examples, made connections and relationships, gave in-depth descriptions and drew conclusions within discussions. Both philosophical and conceptual discourse took place in the posts around the artist's work. This is where examples of Sullivan's authentic engagement through meaningful connections were identified. This result was beyond the expectation of the researcher. Student to student communication while less prevalent, on two occasions, demonstrated that students were thinking about and making meaningful connections across discussion threads while using syllabus conceptual structures. The student to teacher responses were limited to observations, directional instructions and positive feedback about group achievement and did not demonstrate any meaningful connection with the students or discussion.

(b) How are Visual Arts Syllabus processes enacted within online learning and specific Visual Arts tasks?

The results indicated that the students demonstrated and enacted the curriculum mainly through the process of asking questions. The questions were analysed in terms of the way students had utilised the syllabus Frames and Conceptual Framework structures to guide their investigation of the artist and her work. These structures and activities have easily transferred to the online environment as the students were able to successfully apply these in the new context without difficulty. An emergent process that was identified by the researcher pertained to the artist giving advice to students, which arose from the discussion data. This interaction and discussion with the artist illustrated that the online environment can provide valuable unexpected engagement for the students.

RQ3: Social Context for Instruction

What kind and quality of student products are developed through the online learning environment?

The kind of documents that were attempted by students were working on a Conceptual Framework word document and then working towards a basic WIKI. The quality of these products was not determinable due to technological compatibility and upload size challenges. This adversely affected the interaction possibilities in the asynchronous discussion. It was not possible to investigate or summarise any results from the works sample due to this loss of data.

Preliminary Conclusions from the Study

Three initial objectives were used to develop research questions and data analysis tools to interrogate the data. There has been mixed success in the results.

The three objectives were:

(1) to demonstrate student perceptions before, during and after their online experiences

(2) to evaluate the socially mediated communication produced in the online component of the program

(3) to evaluate the outcomes in the form of possible work samples.

The first two objectives were achieved, while the third in part could not be consolidated, as the data was lost when a server was decommissioned without the researcher's knowledge. This was an unfortunate limitation of the study.

The first preliminary finding demonstrates that online learning has not been a common pedagogical method in the school setting. The significant outcome from the implementation of the current program and the researcher's commitment to develop this form of learning is that other subject areas in the school have begun the assimilation of online discussion as part of their programming. As a result of this case study and the interest it provoked, a transition from face-to-face to a blended approach to learning has been initiated in other subject areas.

The second finding is that student reflection discussions are an important learning tool in the online process. Students demonstrated the ability to reflect upon and discuss the function of online groups by evaluating the strengths, weaknesses and achievements of the group. This demonstrated that students were able to work collaboratively in this context. The students' responses to the Online Feedback Questionnaire affirmed the value of asynchronicity in online discussions and were generally positive about online experiences.

The third finding demonstrates that students have not been aware of the distinction between the two types of writing found in art historical and critical practices. Rather, students gave generic responses to questions asked about art writing, referring to language and essay structures that are relevant to any subject. In this line of questioning, students also agreed that communicating with the artist made the unit of work more relevant to their studies.

The fourth finding demonstrates that students have been able to engage the knowledge of the Visual Arts Syllabus and operate syllabus structures to a high level in the online environment. This transfer of knowledge and skills is significant because students were able to link syllabus

structures such as the Frames and Conceptual Framework to questioning in discussions, enabling them to gain philosophical meaning about the artwork under investigation.

The fifth finding demonstrates that students have been able to make regular connections in their discussions with an artist. The strongest connection that was made related to the artist-artwork relationship, with three-quarters of the discussion responses making connections. There were two responses that were significant, indicating that the artist and the students were operating in the discussion to gain meaning and a sense of connection to the artwork and to the artmaking practice of the artist.

The sixth finding illustrates the common outcome of technical difficulties and time lags in asynchronous discussion threads. The negative effects time lags have on the motivation and completion of online discussion and activity were made clear in the last discussion thread that was investigated.

Recommendations from the Study

The single case study methodology in this instance offered insightful episodes of interaction for research and investigation. This methodology was relevant for the study as generalisations were not its objective. The use of the small sample in the study made it possible for the researcher to isolate and process salient examples of dialogue from the online work that the group under study had completed – especially since there was such a large number of responses in the discussion threads – and for these examples to be investigated and interpreted at some depth by the researcher.

The timing of the program and training of the students, staff and artists should be considered when developing and delivering a program such as the one employed in this case study. This unit was delivered in the third term of the Higher School Certificate (HSC). It may have been more appropriate had it been placed at the beginning of the HSC course, as students may have been able to dedicate more time to the online work and complete all aspects of the online program. It is recommended that online interactions be given appropriate time to develop; however, with the

challenge of persuading artists to work online, this was the only time available for all participants to engage in this study. This is one of the challenges of working in educational field research.

Even though the MOODLE software used was not complex, it had hidden and not-so-obvious features that made the initial engagement with the unit take longer than anticipated. A recommendation here is to have a preliminary unit built into the design of a project that would allow participants time to practise and engage with the interface of MOODLE. A user instruction package that highlights basic operations such as starting threads, posting discussion, and uploading/downloading files or images would also be useful.

The engagement of the researcher as the administrator of the MOODLE site gave the researcher insights into how the platform worked; however, it is recommended that a separate help desk with support from the IT Department within the school be provided to ensure that the researcher does not participate in any online discussions or the resolution of technical issues. Hence the researcher would be removed from any communication with the research participants during the running of the unit. It would also help ensure that prompt assistance would be offered to participants as needed.

Equal access to the internet and appropriate software such as compatible versions of Microsoft Word should also be offered to all participants to help ensure equity and access for all group members. This may improve the group's commitment to working online and facilitate final outcomes achieved.

Five recommendations have emerged directly from the results in addition to the two recommendations from the initial survey conducted prior to the students' beginning online work. The first of these recommendations from the initial survey came from the Technical Skill Level component of the Pre-Online Questionnaire. It is recommended that Question 9 be rewritten for future studies. The question should read: Describe or list other online learning experiences you have had at school?' This is a more direct question and uses more appropriate language for secondary school students.

A recommendation that can be made from the art writing component of the survey is that an activity in the senior course programming defining and highlighting examples of the two aspects of art writing practice, that is, art historical and art critical writing, is required for students to develop a deeper, coherent understanding of these aspects and how they play a role within the context of the art world. Observing and practising the differences between these two aspects of art writing should be a continuing activity in senior programming at the school.

The feedback questionnaire identified one section that had caused some confusion. It is recommended that statement number 36 in the questionnaire be revised to read as follows: 'I did not learn while working online'. This should clarify the intention of the statement for participants.

The researcher managed the development of the online learning activities. There is evidence to suggest, however, that this might be best kept as an initial strategy only and that, as students become more comfortable with the medium, they be allowed to start their own discussion threads. This recommendation might allow for unguided discussions to occur and give students more motivation to engage the unit.

The decommissioning of the MOODLE server without the researcher's prior knowledge adversely affected the possibilities of concluding investigations relating to RQ3. This identifies a need for a transparent and explicit policy within the school relating to data storage and the decommissioning of servers, especially the timing of the latter. All stakeholders involved need to be informed of the timing of decommissioning before it occurs so that adequate measures can be taken to archive online discussions and files. On the other hand Murphy's Law is ever present in technical systems. The Head of Department may develop a discreet backup of data storage system and the last refuge is hard copies of everything.

Concluding Remarks

This study is an example in addressing an absence of research and application of ICT applied to areas of Visual Arts beyond art making. It has gathered selected research publications

and theories, of work relevant to social mediation and construction of meanings in the Visual Arts. The study itself is innovative in method and content by constructing these experiences for Visual Arts high school students within the written component of the HSC curriculum in New South Wales. The unit of work signals the learning benefits in constructing interactive asynchronous environments within a school. These facilitate social construction of meaning making in a collaborative and emerging way. This study is a timely attempt to decouple learning in Visual Arts writing/studying from examination style tasks. The unit of work exemplifies the significance of experience of an interaction with original artworks for the students. In this study the originals are part of the school's collection and seen in the students own environment but the experience would be equally accessible in collaboration with a regional, city, state or historical collection.

The curriculum and syllabuses in the Visual Arts are likely to always be dominated by experience mediated through reproductions. This study does not aim to replace this convention but to moderate it with injections of experiences of the real and original. Thus exemplifying Sullivan's notions of meaning, connection, doubt and perspective in the Visual Arts. Secondary school Visual Arts programs should provide avenues for students to experience, in Sullivan's words, 'a sense of meaning and connection' with artists, artworks, critics and historians. The employment of technology as a vehicle to achieve this is one way of shifting to a new paradigm of teaching and learning in the Visual Arts.

The blended learning environment is a vehicle that can redefine the notion of the 'audience' for the student in a seamless and immediate way by

- (1) offering immersive encounters in the students own environment and
- (2) empowering students and redefining both audience and artist/audience concepts. The student dialogue/discussion online with the artist(s) transforms the student into a critical audience by engaging, questioning, integrating and confirming with their artist the

artwork/object meaning.

- (3) applying these experiences in a Vygotskian sense the students are pushed or push themselves beyond their actual development. This is done through teacher intervention (unit of work) and socially mediated interactions. These can include face-to-face, peer to peer, student to artwork and students to artist practitioners. These interactions are demonstrated in the context of art writing, which provides opportunities for meaning making. This is an instance of Efland's three stages of symbol processing, the sociocultural and integration.

It is also worth noting that this study exemplifies the Australian Council of Deans of Education's concern with proposition number four that knowledge today is highly situated, linked to specialist knowledge, particular to technology with subcultural interests or community groupings and proposition five that technology will become central to all learning. The initial case study exemplifies a sentiment or spirit of the 2 previously discussed propositions. By providing an exploratory instance of the technological centrality to all learning and the nature of knowledge today as highly situated.

This study has demonstrated that a blended approach to learning in the Visual Arts using an online environment which, actively engages students in socially mediated interactions with art practitioners will change students' perceptions about learning. The selection and the design of the research questions in this study enabled investigations to be carried out at some depth and to produce six preliminary findings. This study has taken steps towards making theoretical connections and contributions to the development of the art historical and critical body of research in the field of contemporary Visual Arts Education. There is evidence to suggest that blending art, technology and authentic face-to-face and online experiences in the Visual Arts enhances meaningful interactions.

Suggestions and Implications for Continued Research

To continue the research begun in this study, it is suggested that the amount of time allocated for conducting the program be increased and that the program be placed earlier in the Year 12 Visual Arts course. In addition, students could be introduced to MOODLE software in yr 9-12. Further, if any staff, students or artists are unfamiliar with the software used in the program, training in its use should be conducted earlier in the academic year. A site administrator should also be in place from the IT Department in the school. This administrator would deal directly with helpdesk type questions from the teachers and students involved and with setup of the background of the MOODLE site.

Identifying teachers' perceptions of online learning before and after working through the unit would also be useful. Administering pre-online and post-online questionnaires for teachers would assist in this regard. This addition to the research would enhance the findings by providing data for a comparative analysis of perceptions about online learning between teachers and students in the secondary school context. Such information will optimise the refinement of the blended learning environment over time.

Another relevant investigative approach would be to run parallel components in a study, with one online discussion group working with primary sources such as the artworks and artists, and another online discussion group working with only secondary resources, and conducting discussions within the student group but without any input from the artists. This approach could then isolate the implications and value of asynchronous discussion for Visual Arts education.

On a larger scale, this study could also be expanded and adapted to enable two or more schools to participate in the online environment and the Visual Arts Program. The connections made within this online community would also be worth investigating. This would enable an increase in the participation of Visual Arts secondary students in the online environment.

A larger section of the Visual Arts program model should also be investigated to include the five stages of online learning and the different types of interaction. This would allow for a greater comparative analysis to be examined in the results, demonstrating how participants are interacting in different online relationships.

From a theoretical point of view, a stronger pedagogical relationship between Salmon and Vygotsky's work would enable the possibility of a researcher to investigate how students may learn and move through the stages of Salmon's Five Stage Model. An exploration of this would be a useful trajectory to a study such as this.

The existing program design model could also be reviewed and further developed to include meaningful connections in dialogue and collaborations in online environments. This would add to the already useful interaction aspect of the model. Providing more depth to the investigation of the online interactions already investigated. This could be another avenue for further investigation and a research devise could be created to isolate and interpret these particular instances from a Visual Arts perspective, further driving more field specific research questions. Research questions could include:

- 1) How do students and teachers perceive their Visual Arts experiences and interactions in the online environment?
- 2) How do students make meaningful Visual Arts connections in their online dialogue with artists?
- 3) How do students communicate and work collaboratively with their peers and others in the Visual Arts online environment?

These three questions are still relevant to the three aspects of the theoretical framework but lead the researcher to isolate more Visual Arts specific content in the results.

More research in the area of the historical and critical aspects of Visual Arts teaching and learning is also needed. The written aspects of the arts, is prevalent in the artworld, there is less focus or opportunity for students to specialise in theoretical aspects of the Visual Arts curriculum as

artmaking and studio practices are the continued focus even in the new Australian Curriculum.

More research in the historical and critical aspects of art writing at a secondary level is needed to promote the value of this specific field within Visual Arts education. A way forward for Visual Arts teachers is to use this model to structure art historical and critical experiences for students.

APPENDICES

Appendix 1: Participant Information Statement and Consent Form

Approval No 062039

THE UNIVERSITY OF NEW SOUTH WALES AND SCECGS REDLANDS

A case study to examine the quality of student online dialogue, generated in the context of a Visual Arts unit of work, within a collaborative environment using MOODLE courseware.

[Participant selection and purpose of study]

You are invited to permit your child to participate in a study of online learning in Art Education. We (*i.e. the investigators*) hope to learn whether higher order learning can be evidenced through indicators identified within the dialogue generated by students collaborating with their peers, e-tutors and artists. Your child was selected as a possible participant in this study because they are a senior student at SCECGS Redlands and are completing the Higher School Certificate in Visual Arts.

[Description of study and risks]

If you decide to permit your child to participate, we (*or other designated research person[s]*) will introduce your child to online learning using MOODLE Open Source Courseware. Students will work online in a small group on a case study called 'Art Prizes In Australia'. The unit of work is structured over 8 weeks where online discussion with a group of students, an art teacher and an artist will take place. Students will be required to complete three activities that will be assessed for school based reporting only. A minimum of three to five logins a week is required to complete the online component. Access to the Internet is essential. Students will be also asked to fill out a pre and post evaluative questionnaire about their experiences. The research project will investigate the dialogue generated in the online component. There is minimal risk to participants in this study and possible benefits include having direct access to artists and their work when completing activities, collaborating with others to problem solve and evaluating and reflecting on learning processes. We cannot and do not guarantee or promise that your child will receive any benefits from this study.

[Confidentiality and disclosure of information]

Any information that is obtained in connection with this study and that can be identified with you or your child will remain confidential and will be disclosed only with your permission, except as required by law. If you give us your permission by signing this document, we plan to discuss and publish the results within the university, academic journals and the community of SCECGS Redlands. In any publication, information will be presented in such a way that it will not be possible to use it to identify you or your child.

[Recompense to Parent/Guardian of Participants]

There is no remuneration for parents or participants in this study.

Complaints may be directed to the Ethics Secretariat, The University of New South Wales, SYDNEY 2052 AUSTRALIA (phone 9385 4234, fax 9385 6648, email ethics.sec@unsw.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

[Your consent]

Your decision whether or not to permit your child to participate will not prejudice you or your child's future relations with The University of New South Wales and SCECGS Redlands. If you decide to permit your child to participate, you are free to withdraw your consent and to discontinue your child's participation at any time without prejudice.

If you have any questions, please feel free to ask us. If you have any additional questions later, Ms. Meg Lomm will 9968 9845 be happy to answer them.

You will be given a copy of this form to keep.

PARENTAL (OR GUARDIAN) INFORMATION STATEMENT (continued)

A case study to examine the quality of student online dialogue, generated in the context of a Visual Arts unit of work, within a collaborative environment using MOODLE courseware.

You are making a decision whether or not to permit your child to participate. Your signature indicates that, having read the attached Parental (or Guardian) Information Statement, you have decided to permit your child to take part in the study.

.....
Signature of Parent/Guardian

.....
Signature of Witness

.....
Please PRINT name

.....
Please PRINT name

.....
Date

.....
Nature of Witness

.....
Signature(s) of Investigator(s)

.....

.....
Please PRINT Name

REVOCATION OF CONSENT BY PARENT (OR GUARDIAN)

A case study to examine the quality of student online dialogue, generated in the context of a Visual Arts unit of work, within a collaborative environment using MOODLE courseware.

I hereby wish to **WITHDRAW** my consent for my child/ward to participate in the research proposal described above and understand that such withdrawal **WILL NOT** jeopardise any treatment, or my child/ward's relationship, with The University of New South Wales and/or SCECGS Redlands.

.....
Signature

.....
Date

.....
Please PRINT Name

The section for Revocation of Consent by the parent/guardian should be forwarded to Kim Snepvangers, Head of School, School of Art Education, PO BOX 259, Paddington, Sydney, 2021.

Appendix 2: Pre-Online Learning Questionnaire

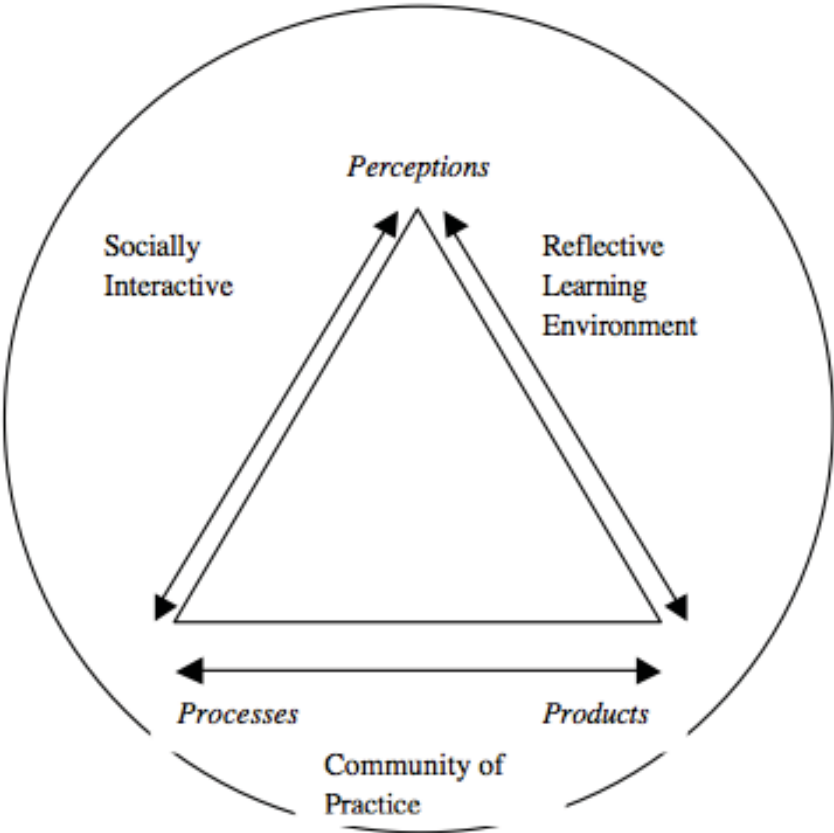
Instructions: Complete the following questionnaire by circling the correct answer or using full sentences.
Technology Skill Level
1. How would you rate your skill level in using technology?
Beginner Intermediate Advanced
2. How regularly do you use the computer?
Daily Weekly Monthly Never
3. How comfortable are you using software like Word, Powerpoint, Excel?
Beginner Intermediate Advanced
4. Do you have internet access at home?
Yes No
5. How often would you use the internet?
Daily Weekly Monthly Never
6. Do you use email and chatrooms and/or forums?
Yes No
7. Have you completed any type of course online?
Yes No
8. What do you think online learning is about?
Group Work
9. How do you feel about group work?
10. What possible problems have you experienced in the past in group work situations? Give specific examples
11. What positive experiences have you had with group work?
12. Which of the following roles best describes you within a group?
Leader Co-ordinator Secretary Participant Observer
Art Writing Practice
13. What is your understanding of art writing?
14. What makes art writing difficult for you?
15. What kind of support do you think you need to improve your art writing?

Appendix 3: Online Feedback Questionnaire

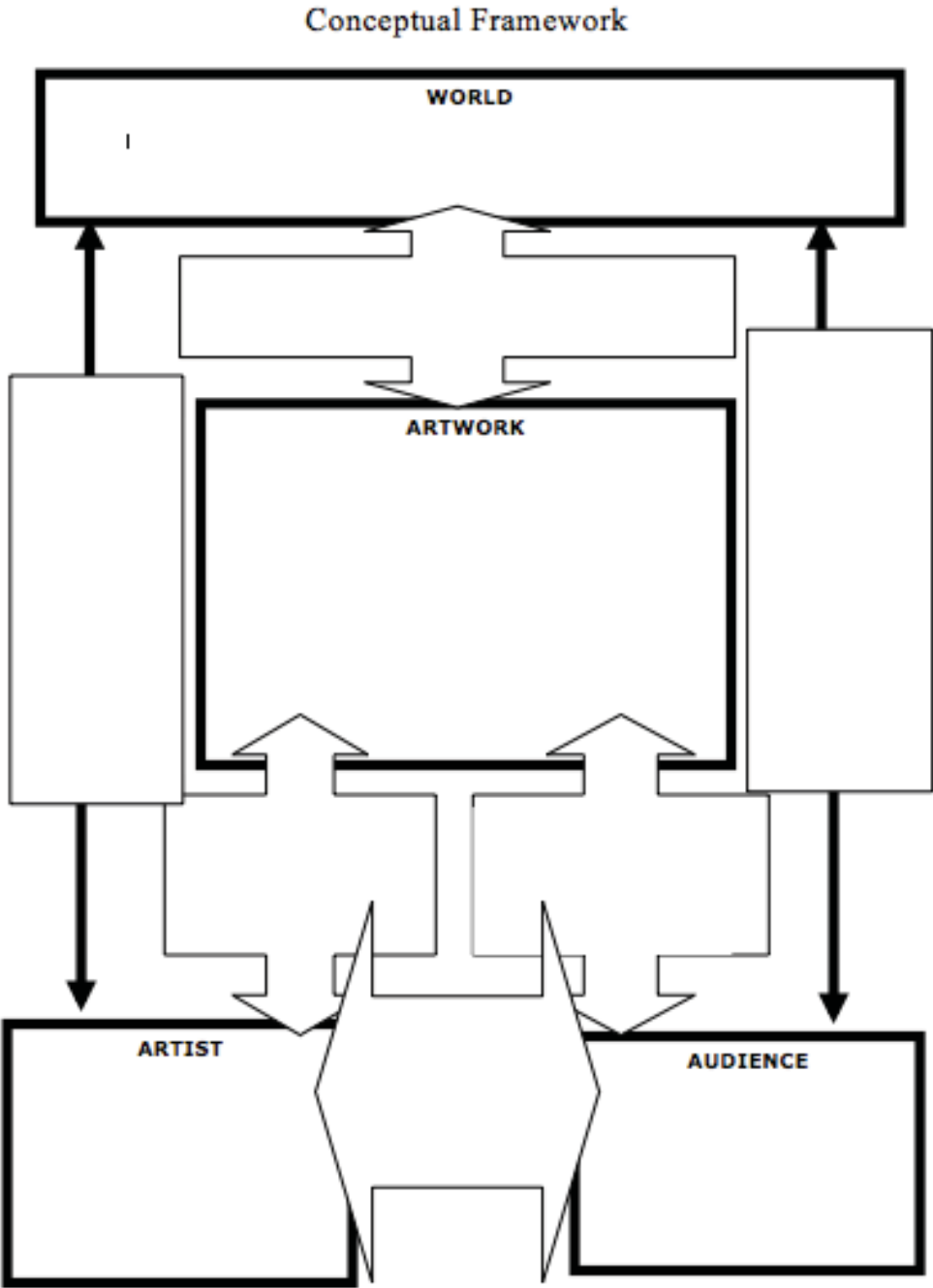
Instructions: Please complete the questionnaire by placing a tick in the appropriate box indicating your					
SA = Strongly Agree A = Agree D = Disagree SD = Strongly Disagree NA=Not Applicable					
Technical Issues	SA	A	D	SD	NA
I experienced difficulties in accessing MOODLE and the online case study					
I used the help desk to resolve my access issues					
Using MOODLE for the first time was easy					
I initially needed more explanation on how to use MOODLE					
I was able to overcome technical issues online by					
Online Unit Outline, Assessment, Resources, Expectations	SA	A	D	SD	NA
The purpose of the online case study was clearly explained.					
I understood the assessment criteria for this unit of work.					
Online resources were appropriate and useful for the e-tivities.					
The expectations of the online unit were clearly outlined at the beginning.					
I understood the online expectations and how I should participate in discussions.					
E-tivities	SA	A	D	SD	NA
The first e-tivities allowed me to get comfortable with the online environment.					
The e-tivities were well structured and helped guide the groups work.					
There were too many e-tivities to complete in this unit of work in the time					
The explanation of the e-tivities were clear and concise.					
I found the login and time guidelines were accurate in giving me an idea of how					
The most challenging e-tivity was because					
Art Tasks	SA	A	D	SD	NA
I felt comfortable with the content of the art tasks as they were similar to class					
I found the art tasks appropriately challenging and stimulating.					
The structured art tasks allowed me to extend my knowledge.					
Through the art tasks I was able to develop new knowledge.					
The art tasks were far more / less difficult to complete online because					
Art Writing Practice	SA	A	D	SD	NA
I feel this unit of work has improved my art writing skills					
The discussions that took place online had impact on the quality of the groups					

Working with drafts and feedback from e-tutors and artists meant that work					
I found it difficult to produce work electronically					
Group Work	SA	A	D	SD	NA
I found working within a group online was challenging.					
I learnt a lot from the other group members.					
Working online has let me develop relationships with students I would not					
Group discussions helped me understand the tasks in greater depth.					
Having time to consider other students points of view and give a considered					
I struggled to make contributions to the group discussions.					
What would have made your online group work better?					
Learning	SA	A	D	SD	NA
Approaching this topic online has been beneficial to my learning					
I learnt how to negotiate with others in the online community					
I learnt how to work on problems in a group situation.					
I learnt little working in this new way					
I felt that I have developed a deeper understanding of the topic					
E-tutor	SA	A	D	SD	NA
The online e-tutor I had made me feel welcome and guided me through the online					
Adequate support and feedback was given by the e-tutor to the group.					
The e-tutor was more like a mentor than a teacher.					
Guest Artists [Art Practitioners]	SA	A	D	SD	NA
Being able to talk to artists directly made this unit of work more relevant to my					
The feedback the artist gave improved the final copy of the group work.					
Improvement to learning activities	SA	A	D	SD	NA
How do you think the online unit of work can be improved?					

Appendix 4: The Triple P Framework Model



Appendix 5: The Conceptual Framework Scaffold



Appendix 6: Art Prizes in Australia Case Study Program

2008	Year Group:	12	Unit Title:	ART PRIZES IN AUSTRALIA CASE STUDY # 4	
Outcomes/Objectives				Frames	Agencies
The purpose of this unit is to introduce students to Australian Art Prizes, in particular the Redlands Westpac Art Prize and Collection and the Archibald Prize. The unit of work will provide students with the opportunity to build an online community and discussion panel while working through several specific activities. Students, staff and online guest artists will contribute to this community with different levels of communication. The unit is intended to increase students' direct exposure to artworks within the context of the gallery, and ensure continuing access to a corporate collection.				Subjective Structural Cultural Postmodern	World Artwork Artist Audience
Outcomes: H7, H8,					
STUDYING: Exploring, Developing, Resolving					Registration
Exploring H7					
<ul style="list-style-type: none">Discussion on the role of art prizes.Investigation of types of prizes available in Australia. Discussion of the value of art prizes.					
Developing H8					
<ul style="list-style-type: none">Excursion to Redlands Westpac Art Prize Archibald Prize with lecture Salon de refuse Begin online activity: Groups Name Online discussion					
<ul style="list-style-type: none">Who am I? Online Discussion: referencing the RWAP artists @ http://www.redlands.nsw.edu.auConceptual Framework Artist's Online Questions:Darren SiwesBeth NorlingLucia UzmianiProduce online Conceptual Framework Summary Document using research and online questionsProduce 500 word summary of artist's discussion creating a WIKI page in MOODLE					
Resolving H10					
<ul style="list-style-type: none">Excursion to The ArchibaldResearch into the history of these prizes.Discussion of works and issues related to this year's works. QUESTION: Analyse the role of audience perceptions within Australian Art Prizes. In your answer, you may consider audience to include public, critics, and/or historians, patrons, sponsors and curators.					
Evaluation Comments					

Appendix 7: Online Learning Activities

The following activities were designed to integrate the Five-Step Model developed by Salmon (2002) and the requirements of the New South Wales Board of Studies Visual Arts Stage 6 Syllabus. Embedded in the activities were both syllabus and e-tivity requirements. The online component of the case study 'Art Prizes in Australia' unfolded according to a five-stage online process.

Pre-Online Feedback: In-Class Questionnaire

The Pre-Online Questionnaire was completed prior to the start of the online work in the MOODLE online environment.

TASK 1: Online Chat

Purpose: Introductions, establish a Group Name and a Net Name: live chat: 1 hour.

For this e-tivity you need to:

- (1) Choose a colour to write in when you are completing your online work and documents.
- (2) Introduce yourself to the group. Post a short paragraph about who you are and what you are doing in your artmaking practice for the HSC.
- (3) Suggest a group name in this post for discussion.

You may like to choose a Net Name or, if you like, an abbreviation of your name for ease of typing. You should also add a picture to your information page if you have not already done so.

Respond: to others as they login and make positive responses to their introductions. Discuss whether you like the group names offered and choose a name for the group.

Feedback and Assessment: Groups will score according to participation rate.

TASK 2: Forum: Who Am I ?

Purpose: for students to be introduced to artists and to get to know their group online.

Minimum of 3 logins required by all group members, 1 hour.

For this e-tivity, artists will be allocated to each group.

Each artist will login and present themselves as a 'Who am I?' question, giving clues about their identities and their work.

The student group will need to:

- (1) Investigate and discuss the clues online and visit the school's website to find the Redlands Westpac Art Prize webpage for more information about the artists in the collection.
- (2) Post their answer by Thursday 15 May 2008.

Respond: to the messages from your group that help you find the answer!

Feedback and Assessment: Groups will score according to participation rate and how quickly they find and post their answer.

(The first person to reach this forum should start the discussion.)

TASK 3: Forum Reflections

Purpose: for students to reflect on their online experiences.

Reflection: 3 logins required, 30 mins

What are your thoughts on the online learning experience so far?

(The first person to reach this forum should start the discussion.)

TASK 4a: Forum Conceptual Framework (4 discussions)

Purpose: to formulate questions for the artist, using the conceptual framework.

Conceptual Framework Discussion

Minimum 4 logins per week required by all group members, 2–3 hours across two weeks.

The groups will have 4 discussion threads going, based around the agencies Artist, Artwork, World, Audience.

After viewing the artworks at school, as a group students are to construct a series of questions for their artist based around the agencies Artist, Artwork, World, Audience. A minimum of 3 questions should be generated in relation to each agency to help sustain discussion with the artist online.

Respond: Everyone in the group should offer at least 2 questions and make responses to, and discuss, other questions that are asked.

Feedback and Assessment: Participants will score according to participation rate and the quality of the questions they generate.

TASK 4b: Show and Tell: Students are to discuss their own work with artists.

TASK 5: Forum Reflections

Purpose: for students to reflect on their online experiences.

Reflection: minimum 2 logins, 30 mins.

(1) What were the challenges or difficulties faced in the Conceptual Framework forum?

(2) How has this forum helped with your investigation into your artist?

(The first person to reach this forum should start the discussion.)

TASK 6: Wiki

Purpose: to provide a summary of the discussion held with artists.

Wiki: Artist summary: minimum 5–8 logins required by all group members individually, 3 hours
Groups are to generate a wiki online as a summary of their discussions with, and questioning of, their artist. The Conceptual Framework is to be used as a scaffold for this (this was completed in the previous forum). You may also use the internet and articles and make links to websites, as needed.

A minimum of 500 words with images should be created using the wiki format.

Final submission date is Monday 16 June 2008.

Response: Both e-tutors and artists will provide feedback to students on the progress of their wiki.

Feedback and Assessment: Participants will score according to participation rate and the quality of their written response.

TASK 7: Forum Reflections

Purpose: for students to reflect on their online experiences.

Reflection: minimum 3 logins, 30 mins

What have been the challenges of working in a group online?

Do you think that working online has improved your art writing practice?

(The first person to reach this forum should start the discussion.)

TASK 8: Forum Essay

Purpose: to complete a short essay on art prizes in Australia.

Minimum 4 logins per week, 2 hours per week for 4 weeks

Groups are to prepare an essay based on their knowledge and experience of art prizes in Australia. (Use lecture or class notes, handouts, articles, internet sites and your experience at exhibitions, the Redlands Westpac Art Prize and the Archibald Prize.)

ESSAY TASK:

Analyse the role of audience perceptions in Australian art prizes.

In your essay, you may consider 'audience' to include the public, critics, historians, patrons, sponsors and curators.

Your essay must be presented in a draft format to your e-tutor for feedback before the submission date and should not exceed 1000 words.

The submission date is MONDAY 23 June 2008.

Response: Students will need to assemble relevant knowledge and participate through discussion. An E-tutor will guide students through discussion.

Feedback and Assessment: Feedback on the draft from the E-tutor. Groups will score according to participation rate and the quality of the essay submission.

Online Feedback: In-Class Questionnaire

The Online Feedback Questionnaire was completed at the end of the online work in the MOODLE online environment.

Appendix 8: Pre-Online Questionnaire: Responses to Question 10

Question 10: What do you think online learning is?
Student (SS1–11)
S1: <i>learning online</i>
S2: <i>is a place where students can interact and learn outside of the school environment</i>
S3: <i>gaining knowledge from on line services</i>
S4: <i>learning online</i>
S5: <i>Using a computer to aid in discussion and work compilation</i>
S6: <i>Using a computer (specifically the internet) to learn and form discussions with other online users.</i>
S7: <i>Using a computer (specifically the internet) to learn and form discussions with other online users.</i>
S8: <i>use of the internet in aiding education</i>
S9: <i>it sounds interesting</i>
S10: <i>Interactive learning via technological advancements</i>
S11: <i>Online learning I believe is the acquisition of facts and data and previously carried out research in order to aid or benefit your personal work</i>

Appendix 9: Coding of Groups' Responses

Number	Code	TASK 3: FORUM: Reflection / what do we think of the online discussions?	Direct Interpretation	Assertion	Member Check	Kind of response
1	SAS2u	We've all managed to get done what we needed to.	reports on the group perspective not just own experience	shows he is thinking he is part of an online community	✓	3
2	SAS2v	We've all worked together well, and managed to generate a list of questions relevant to the next section.	Identifies that the group has worked sufficiently to achieve task	demonstrates he sees the group as functioning in the online context	✓	2
3	AFHS1a	I reckon we should start doing some more work on these discussions!	start of discussion	admission that group is not working to full potential	✓	1
4	AFHS2e	yea I think it will also help with our group working skills which we may need in future	Identifies that group needs strengthening in group communication skills	believes the experience will help in future group work	✓	3
5	AFHS1e	and I think we should take advantage of this and discuss possible methods to work effectively as a team to perform to our most proficient!	Identifies weakness in the group	Invites discussion about possible solutions but offers no strategies	✓	1
6	AFHS3g	I believe all of us have finally understood the whole "moodle experience"	comment on group 'understanding' of what is required of them	demonstrating the group is closer to becoming more coherent	✓	3
7	OvsAS1b	so far we have discovered our artist and are currently preparing questions to ask her.	summarises what the group has achieved so far	participant sees this as positive progress in the online context	✓	2
		TASK 5: FORUM: Reflection / Smart Arts Reflection!	Direct Interpretation	Assertions	Member Check	Kind of response
8	SAS1u	im here with all of my people	unusual statement	possibly showing comfort within the group dynamic	✓	3
9	OvsAS3i	it is also hard to get the whole group online..	Identifies weakness in group	habit formation is lacking in getting participants to remember to get on line regularly	✓	1
		1 = Identifies weakness in the group				
		2 = Identifies achievement in the group				
		3 = Identifies with a group perspective within the experience				

Appendix 10: Coded Value Online Learning Statements

Number	Code	TASK 3: FORUM: Reflection / what do we think of the online discussions?	Direct Interpretation	Assertion	Member Check	Kind of Response
1	SAS1a	So guys this is our excellent reflection forum Anywho there was my little rant about how I personally feel we should all go back to the good old fashion pen and paper and speaking face to face. Simplicity is beautiful!	Start of discussion thread, opening statement, acknowledges that she is far more comfortable with face-to-face and traditional writing methods.	value judgement is given to the forum	✓	P
2	SAS3e	Overall I can't ignore the fact that moodle is definitely a positive technological advancement towards learning and can only get better (given that everyone is equipped with appropriate technology).	Indicates that she knows that technology is advancing and will improve and be a positive experience.	qualifies why traditional methods are better	✓	N
3	SAS3f	No I know I totally agree with you with the whole, internet highway is the way to our future education and I definitely do see its benefits, (though still, not a huge fan of the whole online learning thing, don't you think it would be so much cooler to go visit the students in the other countries instead?)	Participant yet again agrees on the value of the internet and its benefits for education, still reiterates that she is not comfortable with the medium then validates this with a question. Question is not responded to by e-tutor	So far the online experience has not been positive for this participant	✓	N
4	SAS3g	I was just speaking more so in regards to the live chats and things because they make it a tad hard for me as they are usually later at night.	participant explains what aspects of online learning are difficult	Participant is not sold on the idea of online learning because she has had little success with the MOODLE platform and access to the internet.	✓	N
5	SAS3h	I think that the online learning has been good so far.	positive value comment about online learning	Time seems to be an issue at night.	✓	N
6	SAS1k	As we have had interaction with an artist that we haven't met or seen any of her works before.	participant gives example of what has been valuable about the interaction online with a practitioner	experience is valued as good	✓	P
7	SAS1j	and I think that taking school work home on one hand is a lot easier, as there is not pressure to get the work done in a period time frame.	participant gives another example of pressure to complete work at home being easier using online medium	values experience with artist	✓	P
8	SAS1m	So far I think that our online experience has been successful,	positive value comment about online learning	Indicates that working at own pace is better, having more time to complete tasks.	✓	P
9	SAS4a	especially as we were the first group to guess who our artist was	refers to success in being first group to complete an activity	experience is valued through success	✓	P
10	SAS4b	and it is really great that we are actually taking to artists about their works so easily...	acknowledges the change in engaging with homework practices	gives success with working together to complete the task quickly and first	✓	P
11	SAS4d	I believe that the experience so far has been pretty good.	comments on the ease of talking to artists	sees it as positive?	✓	P
12	SAS4e	Excellent.	positive value comment about online learning	the online medium allows for ease in communication	✓	P
13	SAS2t	this is a whole new experience!!!	identifies the online experience as new	experience is valued as good	✓	P
14	SAS2x	moodle, my love. its actually quite fun this online "experience"	directs response to software MOODLE	indicates satisfaction	✓	P
15	AFHS2b	and being able to talk about art and find new information	identifies positive outcomes with engagement in online environment, interaction	demonstrates that she is still getting used to the online environment	✓	P
16	AFHS3a	i think we understand more about the online learning system	positive value comment about online learning	equates experience so far with fun	✓	P
17	AFHS2d	its good to be able to have something real to talk to, rather than a book or an article.	Indicates positive experience with a primary resource, the practitioner	values the discussion and new way of gathering information	✓	P
18	AFHS3e	its so much more exciting then reading everything....	the act of communication is described as exciting	advocates that the group understands what online learning is	✓	P
19	OvsAS1a	this is good	Identifies the online environment	values the interaction with the artist in the 'real world' and as a primary source of information	✓	P
20	OvsAS2b	nah its really good to be able to actually communicate and discuss with someone instead of just reading about them..	Indicates the value of interaction and communication	finds satisfaction in the use of the online medium	✓	P
21	OvsAS2d	We can actually get the facts we need straight from the person instead of trying to find things out about them..	Identifies the positive aspect of interaction with the practitioner	positive value judgement about the success of the interaction and the online context	✓	P
22	OvsAS3c	and we all know about the internet and information..	Identifies failures of the internet	primary resource / investigation is valued higher than secondary sources	✓	P
23	OvsAS3d			participant values accuracy and ease of access to correct information	✓	P
24	OvsAS3f			comments on the inconsistency of internet sources with regard to accuracy	✓	N

Number	Code	TASK 5: FORUM: Reflection / Smart Arts Reflection!	Direct Interpretation	Assertions	Member Check	Kind of Response
25	SAS2dd	It was good to get all the information together from our discussion.	value statement about the summative process	Indicates success in the use of the online medium	✓	P
26	SAS2ee	It was interesting to find out about the person behind the artwork. instead of just considering the artwork as if had been formed in a vacuum. it added to the depth.	Indicates the value of having access to the artist	insight into the 'real' person from primary investigations made the study of the artist more important	✓	P
27	SAS4j	by looking at the conceptual framework that we created, it is a great way to look at the artist overall,	identifies the conceptual framework as summative	uses the product achieved to ascertain that the investigation of the artist was successful	✓	P
28	SAS1t	It has helped i feel, as we can ask questions about the artist, artwork world, etc.	indicates positive outcome with the process of asking questions of the artist	values the interaction with the artist in the 'real world' and as a primary resource	✓	P
29	SAS1u	and get answers that you can't find in any books or the internet.	identifies difficulties in researching emerging artists	secondary research is more difficult and often unavailable	✓	P
30	SAS1v	i also liked how you didn't need to guess or interpret what you think the work is about. you can just get the real answer...	identifies difficulty in interpreting artworks	values the importance of accuracy in understanding artworks rather than making personal interpretations which may or maynot be real.	✓	P
31	AFHS2h	i think this was a really good experience for us to get an inside to how a successful artist works,	indicates the value and success of the experience	equates the online experience with practitioners as valuable due to the 'real world' aspect of the task	✓	P
32	AFHS2i	and for us to be able to chat to them and ask them anything!	identifies freedom as important	learning is controlled by the student	✓	P
33	AFHS2j	wow what an honor thanx R1 for such a great learning experience	thanks teacher for experience	participant demonstrates enjoyment of task	✓	P
34	AFHS2m	but it was very good task because we got the exact answers we wanted and we know the info was correct because it came straight from the artists mouth	identified that the interaction process with the practitioner was successful	valued the task as successful due to the accuracy of information	✓	P
35	AFHS3i	no it was a very good and i think it was a great way of learning	elaborates and concurs	online learning is a positive way to learn	✓	P
36	OvsAS1d	its good to cut through the wifty wafy crap you find textbooks	comments on insufficient information in textbooks	not satisfied with one source of knowledge and information	✓	P
37	OvsAS1e	and actually see that artists perspective.	indicates the value of having access to the artist	values the artists perspective as important to understanding the works	✓	P
38	OvsAS3h	hmm yeah it's good to talk to the actual artists but as they are busy it takes time for a response..	agrees that access to artists is valuable however identifies problem with asynchronous dialogue	having to wait for responses can impact on the progress of the discussion	✓	N
39	OvsAS3k	but yeah... it is much better than just looking through text books cos you actually get a definite response to what you want to know..	agrees with first reflection, identifies the value of accuracy	opportunity for direct response with practitioner is valued as very positive	✓	P
N = Negative Statements P= Positive Statements						

Beth Norling, 2006

Redlands Westpac Art Prize

- 2012 Media Release
- 2012 Emerging Artists
- Previous Winners
- Emerging Winners**
 - Eric Bridgeman
 - Will French
 - Lauren Brincat
 - Lucia Usmiani
- Both Norling**
 - Eileen Napaljarri
 - Megan Sires
- Sponsors
- History
- Archives

Foundation

Alumni

'Nothing To Hold On To'

Plasticine, wall-paper, tape, cardboard, tracing paper and oil-paint.

32cm x 27cm x 10cm , 2006

The use of a subtle, constrained palette within a small sculptural environment engenders a modesty and privacy that is at once evident and yet concealed. Plastiline sits upon the picture plane with a fluidity that implies both decay and growth, and is rendered with the delicacy of lace or fabric which complements the feminine mood of the work.

The empty/receding qualities of the piece, reflected in the nothingness of the title, are accentuated by the artists use of 'impermanent' materials: plasticene, cardboard, paper tape and wallpaper. "Nothing to hold onto..." is a small, private and feminine world, a gentle, optimistic contemplation of impermanence, a work 'about' absence that still retains a strong visual and emotional presence.

Beth Norling was born in Sydney, and lives and works in the Blue Mountains, she will have her first solo show at the Tin Sheds Gallery early in 2008



Nothing To Hold On To, 2006

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